A Network Systems Solution
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A Network Systems Solution
UNICOM™

SmartGST-801M

8 Port 100Base-FX Managed Switch with VLAN and GBIC slot

GEP-62108F-C
GEP-62108F-T
GEP-62108F-C-SM

USER'S MANUAL

1.
Introduction

The 8 Port SmartGST-801M is a high-speed, professional-grade Fast Ethernet switch that provides wire-speed, a Fast Ethernet switching technology that allows high-performance, low-cost connections up to Full-Duplex, 100Mbps Ethernet networks. The built-in GBIC slot allows for optional GBIC adapter, creating the perfect, flexible backbone switch. This switch also features integrated VLAN functions to improve network speed and security. Functions include Per-Port Grouping and Priority Modes.

Figure 1-1. The SmartGST-801M

Features

- All nine ports can operate simultaneously
- Eight dual SC fiber ports available in single-mode and multi-mode
- The GBIC Slot accommodates Unicom GBIC adapters
- One front side Console Port for switch configuration
- VLAN supports up to 25 groups
- Store-and-Forward switching architecture
- 2Mb Memory Buffer Sharing
- Back-pressure for Half-duplex. Pause frame for Full-duplex
- Plug-and-Play configuration auto address learning
- Embedded 8K-entry MAC address table
- LED indicators for Power, LNK/ACT, FDX/COL
- Compliant with IEEE 802.3, 802.3u and 802.3x standards
- 19 Rack-mountable

Intelligent Management Features

- Web-based management
- SNMP network management
- Console and Telnet management
- Port Base VLAN and IEEE 802.1q Tag VLAN. up to 256 VLAN groups, VLAN IDs up to 4K
- IEEE 802.3 ad port trunk with LACP (Link Aggregation Control protocol) supported
- IEEE 802.1d Spanning Tree
- MIB II (RFC 1213) supported
- IP Multi-cast, IGMP Snooping (up to 256 IGMP groups)
- Support Quality of Service (system provides 8 levels) and Class of service (per port Hi/Low Queue)
- Port Mirror, Broadcast Filter, Static MAC Address filtering, Port Security, and GVRP supported

Package Contents

Unpack the contents of the **SmartGST-801M** and verify them against the checklist below.

- SmartGST-801M Switch
- Power Cord
- Four Rubber Feet
- RS-232 cable
- User Guide (CD Manual)

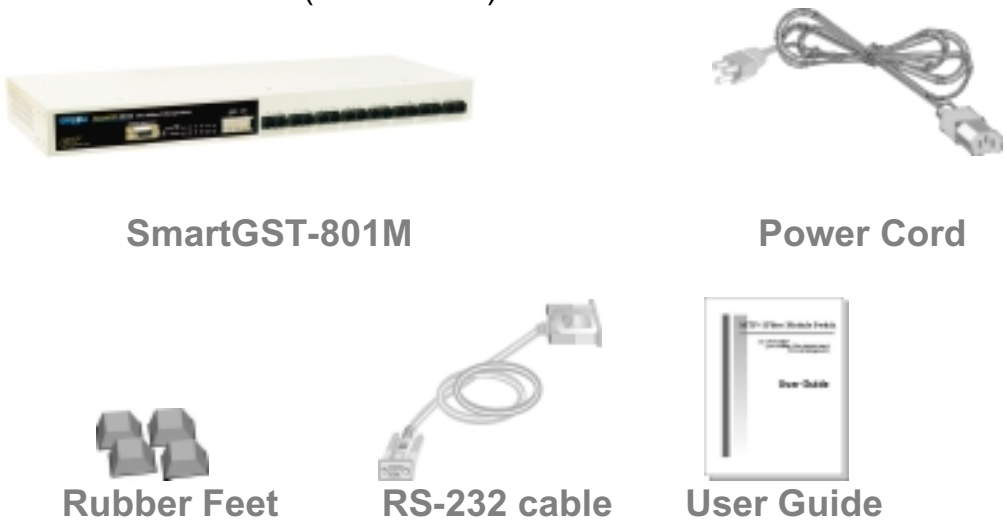


Figure 1-2. Package Contents

Compare the contents of your SmartGST-801M package with the checklist above. If any item is missing or damaged, please contact your local dealer or reseller for service.

Ethernet Switching Technology

Ethernet Switching Technology dramatically boosted the total bandwidth of a network, eliminated congestion problems, and greatly reduced unnecessary transmissions.

This revolutionized networking by allowing two-way, simultaneous transmissions over the same port (Full-duplex) that essentially doubled the bandwidth. Secondly, it reduced the collision domain to a single switch-port that eliminated the need for carrier sensing. This technology also uses a store-and-forward technology approach of inspecting each packet to intercept corrupt or redundant data, eliminating unnecessary transmissions that slow the network.

Ethernet Switching Technology supplies higher performance at lower costs than other solutions. Due to wider bandwidth, no congestion, and the reduction in traffic, switching is replacing expensive routers and inefficient hubs as the ultimate networking solution.

Management Methods

The SmartGST-801M supports the following management methods:

- Console and Telnet Management
- Web-based Management
- SNMP Network Management

Console and Telnet Management

Console Management is done through the RS-232 Console Port. Managing the SmartGST-801M with this method requires a direct connection between a PC and the switch. Telnet management is done over a network. Once the SmartGST-801M is on the network, you can use Telnet to Log in and change the configuration.

Web-based Management

This switch provides an embedded HTML web site residing in flash memory. It offers advanced management features and allows users to manage the SmartGST-801M from anywhere on the network through a standard browser such as Microsoft Internet Explorer.

SNMP Network Management

SNMP (Simple Network Management Protocol) provides monitoring and control of network devices. It manages configurations, statistic collection, performance, and security.

2. Hardware Description

This section describes the switch hardware. The **SmartGST-801M** is a 19" rack mountable switch with eight 100Mbps Fiber ports and one GBIC port

The physical dimensions of the SmartGST-801M are: 440mm x 160mm x 44mm (L x W x H)

Front Panel

The Front Panel of the SmartGST-801M consists of eight 100Mbps Fast Ethernet Fiber and one GBIC port. LED indicators are located on the front panel of the switch.

Figure 2-1. The Front Panel of theSmartGST-801M

The front panel of the switch is displayed as below. There are 2 types of fiber connectors available. These fiber connectors are SC or ST Multi-mode and SC Single Mode.

Console Port: Console management can be done via the Console Port. It requires a direct connection between the switch and an end station (PC) via an RS-232 cable.

SmartGST-801M

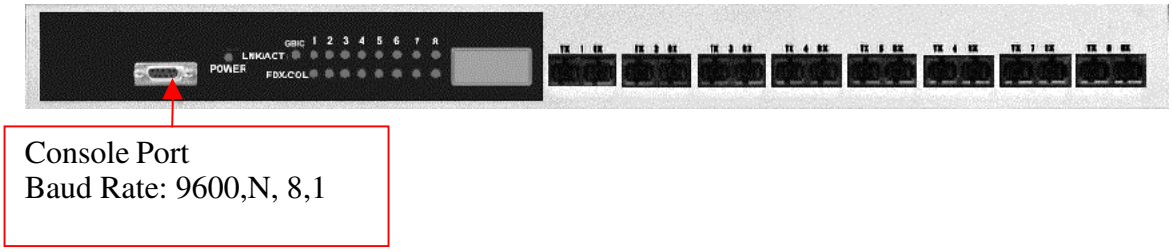


Figure 2-2. The Front Panel of the SmartGST-801M

- **100Base-FX Fiber Port:** There are three types of fiber connectors available for the SmartGST-801M. The distance for fiber cabling can be extended up to 2 kilometers with SC or ST Multi-Mode and up to 30 kilometers with SC Single Mode.
- **GBIC port:** This GBIC slot supports 3.3V Gigabit Transceivers for Gigabit SX or LX only.

LED Indicators

Figure 2-3. LED Indicators

There are three LED Indicators (LNK/ACT, FDX/COL) for each Fiber port and one Power LED. The following table provides descriptions of the LED statuses and meaning. They provide a real-time indication of systematic operation status.

LED	Status	Color	Description
Power	On	Green	Power On
LNK / ACT	On	Green	The port is successfully connecting with the device on 100Mbps.
	Blinks	Green	The port is receiving or transmitting data.
	Off		No device attached.
FDX / COL	On	Orange	The port is operating in Full-duplex mode and device is attached.
	Blinks	Orange	Collision of Packets occurs in the port.
	Off		Half-duplex mode or no device attached.

Table 2-1. The description of LED Indicators

Rear Panel

The Console port and 3-pronged power plug is located at the Rear Panel of the SmartGST-801M as shown in Figure 2-7. The Switches will work with AC in the range 100-240V AC, 50-60Hz.

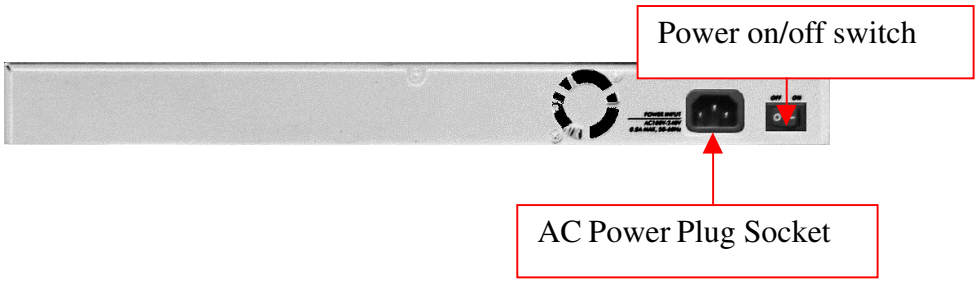


Figure 2-7 The Rear Panel of the SmartGST-801M

Desktop Installation

Set the switch on a sufficiently large flat space with a power outlet nearby. The surface where you put your Switch should be clean, smooth, level, and sturdy.
Make sure there is enough clearance around the Switch to allow attachment of cables, power cord and air circulation.

Attaching Rubber Feet

1. Make sure mounting surface on the bottom of the Switch is grease and dust free.
2. Remove adhesive backing from your rubber feet.
3. Apply the rubber feet to each corner on the bottom of the Switch. These footpads prevent the switch from shock and vibration.

Figure 2-8. Attaching Rubber Feet to each corner on the bottom of the Switch

Power On

Connect the power cord to the power socket on the rear panel of the Switch. The other side of power cord connects to the power outlet. The internal power supply in the Switch works with AC in the voltage range 100-240VAC, frequency 50~60Hz.
Check the power indicator on the front panel to see if power is properly supplied.

3. Network Application

This section provides a few samples of network topology in which the SmartGST-801M is used. This switch is designed as a desktop or segment switch.

Segment Application

In enterprise networks where large data broadcasts are constantly processed, this switch is perfect for departmental connections to the corporate backbone.

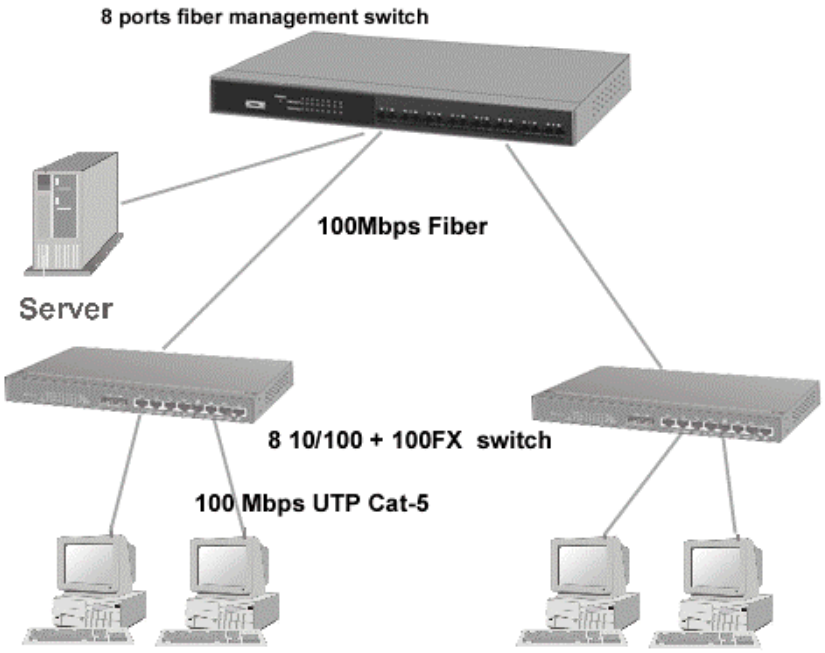


Figure 3-2 Segment Application

You can use the SmartGST-801M to connect PCs, workstations, and servers to each other by connecting these devices directly to the Switch. All the devices in this network can communicate with one another. Connecting servers to the backbone switch allows other users to access the server s data.

The SmartGST-801M automatically learns node addresses, which filter, and forward all traffic based on the destination address. You can use any of the Fiber ports to connect with another switch or hub to interconnect each of your small switched workgroups to form a larger and long distance switched network.

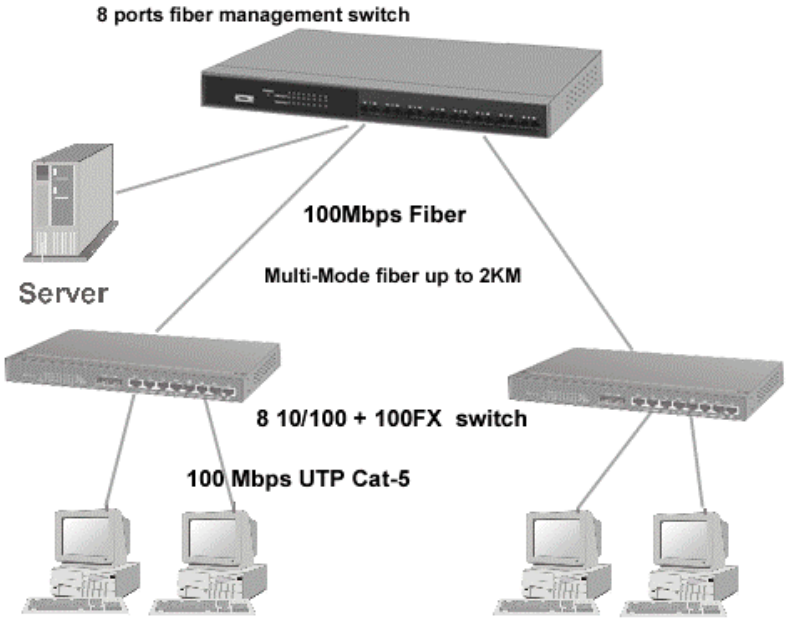


Figure 3-3 Use fiber ports to extend the distance between workgroups

In the above illustration, two SmartGST-801Ms are used to interconnect two small workgroups. By using fiber ports to connect switches, the distance between two switches via fiber cable can be up to 30Km (using a SC Single Mode fiber connector).

4. Network Configuration

This Section explains how to configure console management.

Console management involves the administration of the Switch using a direct connection to the RS-232 console port. This port is a female DB-9 connector. From the main menu of the console program, user has access to the functions of the switch.

Connecting a Terminal or PC to the Console Port

Use the supplied RS-232 cable to connect a terminal or PC to the console port. The terminal or PC to be connected must support the terminal emulation program.

After the connection between Switch and PC is finished, turn on the PC and run a **terminal emulation program** or **Hyper Terminal** to match the following default characteristics of the console port:

Baud Rate: 9600 bps
Data Bits: 8
Parity: none
Stop Bit: 1
Control flow: None

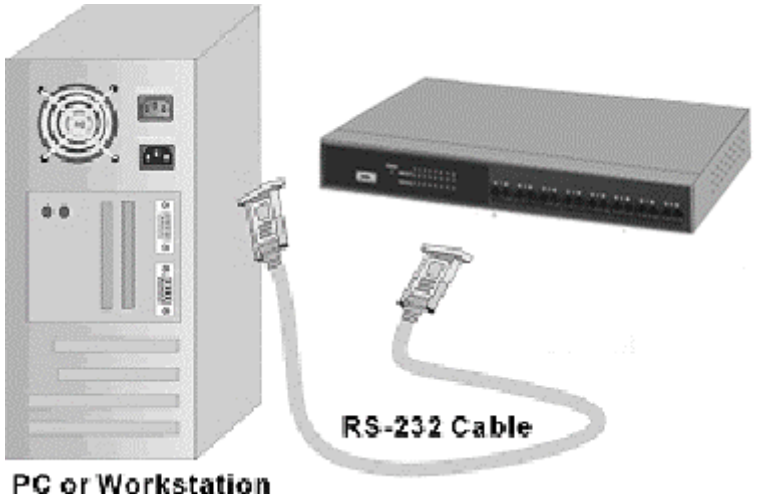


Figure 4-1.
The settings of communication parameters

After you have finished parameter settings, press **Enter** Key and the Main Menu of console management appears.

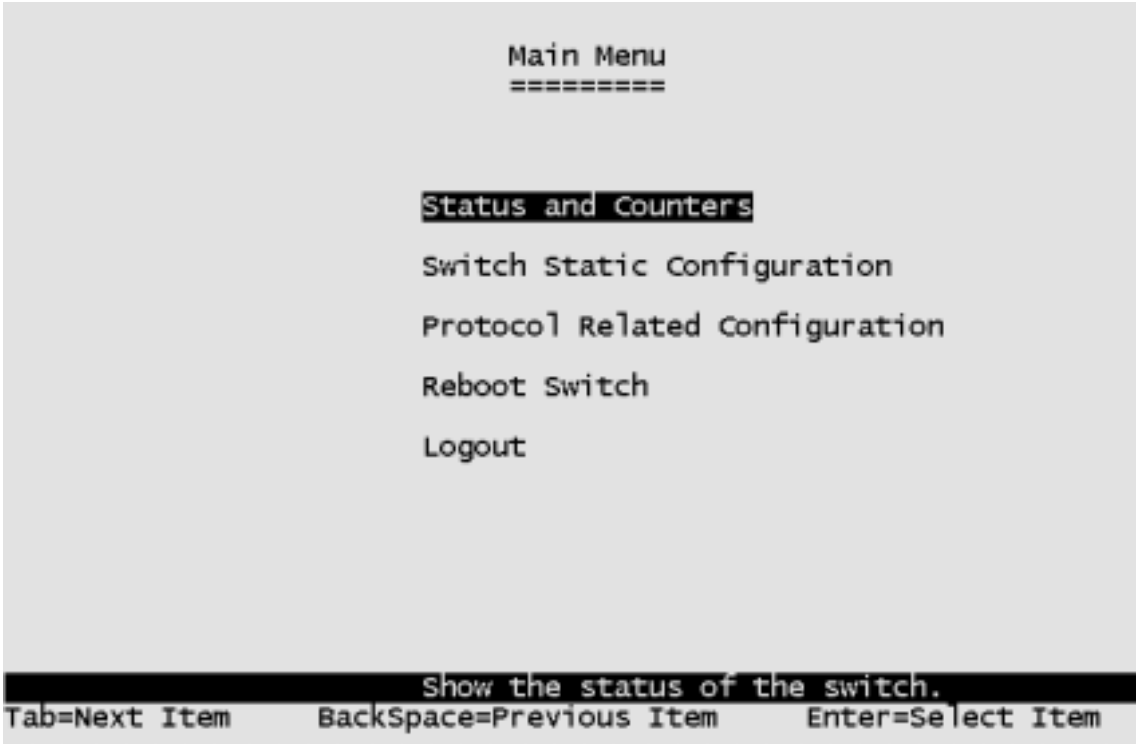
Console — Menu

1. The switch provides a serial interface to manage and monitor the switch. Users can link to the switch through the Console Port using Windows HyperTerminal program.

2. Type user name and password to login. The default user name is root . The default password is root .

4-1 Main Menu

There are five items for selecting as follows:

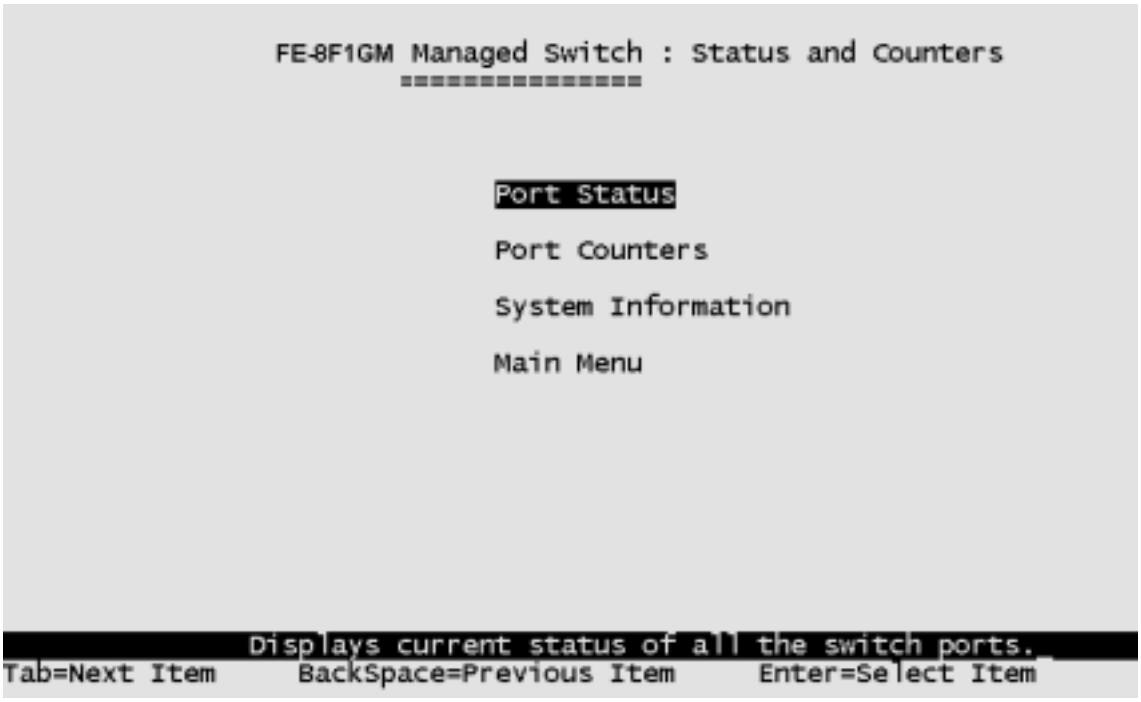


Status and Counters: Show the status of the switch.
Switch Static Configuration: Configure the switch.
Protocol Related Configuration: Configure the protocol function.
Reboot Switch: Restart the system or reset switch to default configuration.
Logout: Exit the menu line program.

<Control Key>

The control key operates in all menus as follows:
Tab: Moves the cursor to next item.
Backspace: Moves the cursor to previous item.
Enter: Selects item.
Space: Toggles selected item to next configure.

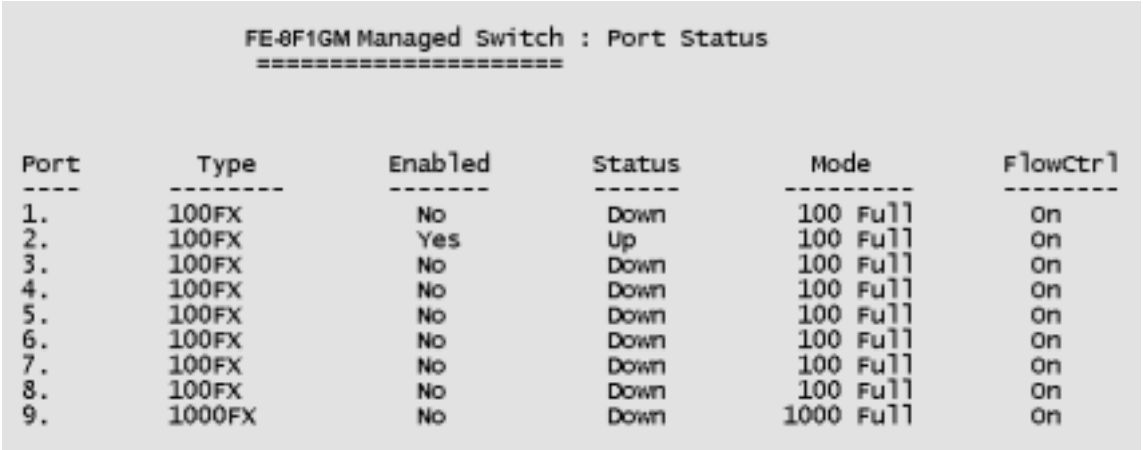
4-2. Status and Counters



You can press the key of **Tab** or **Backspace** to choose item, and press **Enter** key to select item.

4-2-1. Port Status

This page displays each port's status
Type: Displays the port type.
Enabled: Displays whether port is enabled or disable depending on user setting. Enabled will be displayed Yes , disabled will be displayed No .
Status: Displays whether the port is linked or not linked. Down is not linked and Up is linked.
Mode: Displays the port speed and duplex function.
Flowtrl: Displays whether Flow Control is enabled or disabled.


FE-8F1GM Managed Switch : Port Status
Port Type Enabled Status Mode FlowCtrl
1. 100FX No Down 100 Full On
2. 100FX Yes Up 100 Full On
3. 100FX No Down 100 Full On
4. 100FX No Down 100 Full On
5. 100FX No Down 100 Full On
6. 100FX No Down 100 Full On
7. 100FX No Down 100 Full On
8. 100FX No Down 100 Full On
9. 1000FX No Down 1000 Full On

Actions->
You can press the **Tab** or **Backspace** key to choose action menu. Press **Enter** key to select item
<Quit>: Exits the port status page and returns to previous menu.

4-2-2. Port Counters

The following information provides a view of the current status of the unit.

FE-8F1GM Managed Switch : Port Counters

Port	TxGoodPkt	TxBadPkt	RxGoodPkt	RxBadPkt	TxAbort	Collision
1.	0	0	0	0	0	0
2.	0	0	5410	0	0	0
3.	1464	0	2289	0	0	0
4.	0	0	0	0	0	0
5.	0	0	0	0	0	0
6.	192	0	272	0	0	0
7.	0	0	0	0	0	0
8.	0	0	0	0	0	0
9.	0	0	0	0	0	0

Actions->
You can press the **Tab** or **Backspace** key to choose action menu. Press **Enter** key to select item
<Quit>: Exits the port status
<Reset All>: Sets all counts to 0.

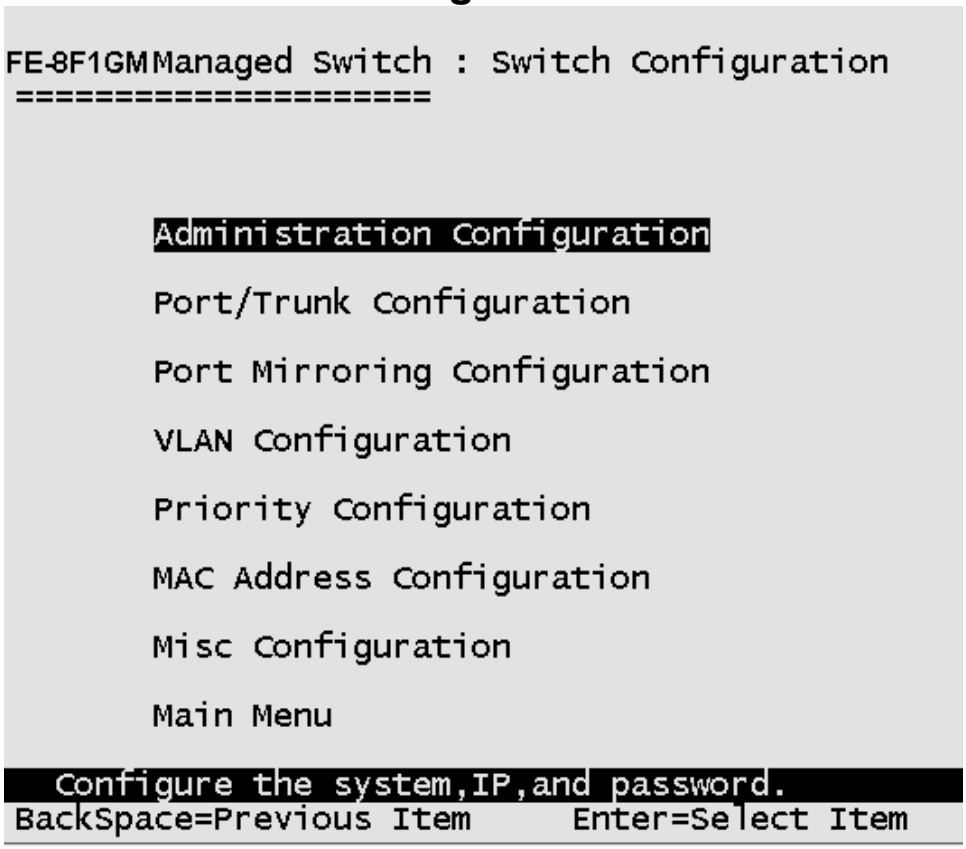
4-2-3. System Information

System Description: Displays the name of device.
MAC Address: The unique hardware address assigned by manufacturer.
Firmware Version: Displays the switch s firmware version.
Hardware Version: Displays the switch s Hardware version.
Kernel version: Displays "write to default EEPROM value" version.

FE-8F1GM Managed Switch : Management Address Information

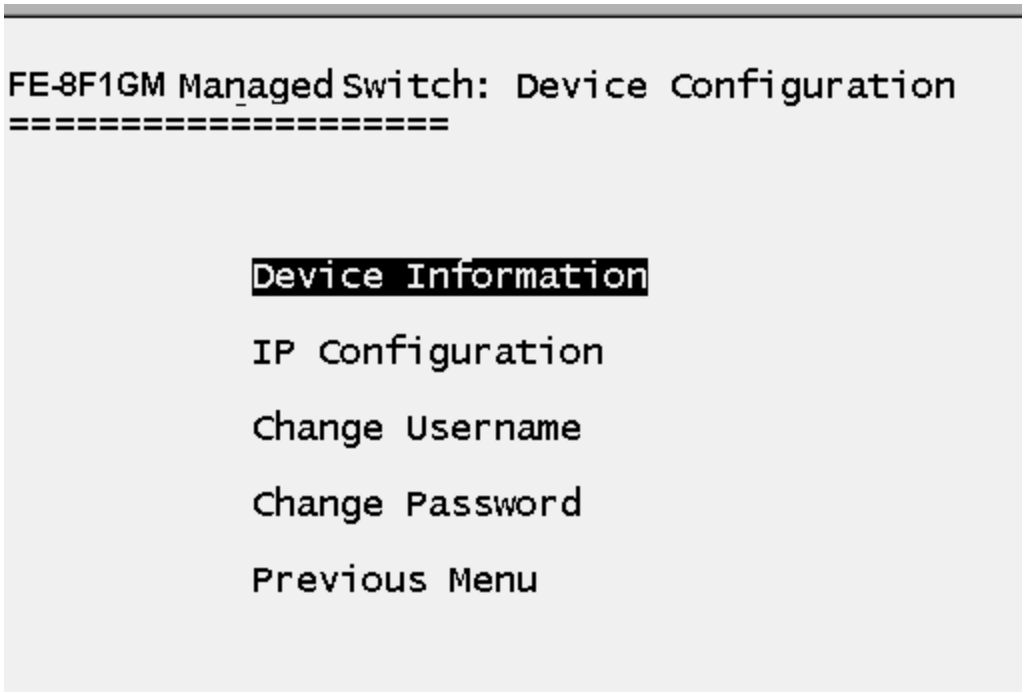
System Description : MiLAN SM808G Intelligent Switch
MAC Address : 004063800030
Firmware version : v01.11
Hardware version : A03.00
Kernel version : v01.06

4-3. Switch Static Configuration



You can press the **Tab** or **Backspace** key to choose action menu. Press **Enter** key to select item

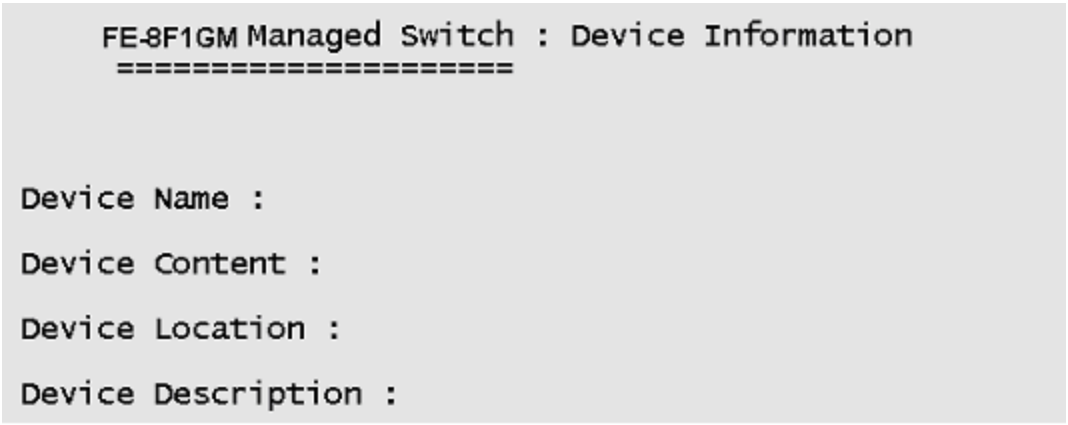
4-3-1. Administration Configuration



4-3-1-1. Device Information

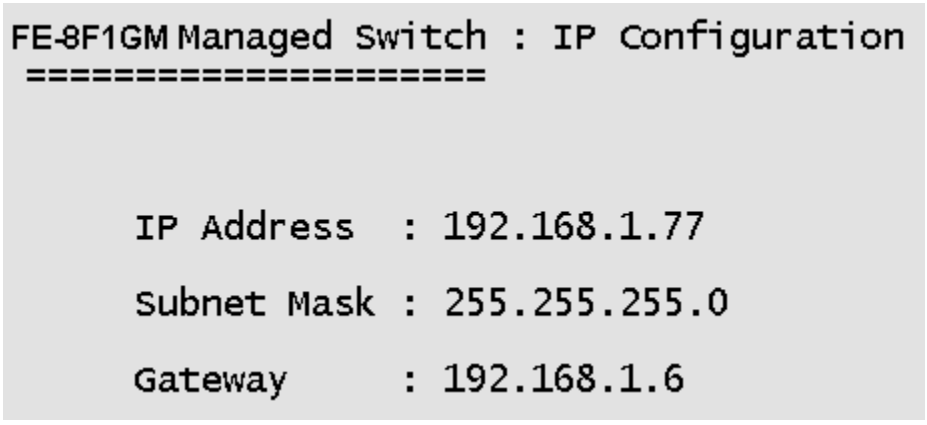
This page provides device configuration information.

Actions->
<Edit>: Configures all items. When finished configuration, press **Backspace** to go back to the action menu line.
<Save>: Saves all configured values.
<Quit>: Exits the Device Information Page and returns to previous menu.



4-3-1-2. IP Configuration

User can configure the IP setting and fill in the new value.
Actions->
<Edit>: Configure all items. When finished configuration, press **ESC** to go back to action menu line.
<Save>: Saves all configured values.
<Quit>: Exit the IP configuration page and return to previous menu.



Note: Always restart the computer after finishing the setup.

4-3-1-3. Change Username

User can change Web Management user name.

4-3-1-4. Change Password

User can change Web Management user password. **The default password is root**

4-3-2. Port / Trunk Configuration

This page provides changes to all port status and configures trunking groups. Press **TAB** key to change configuration of each item.

1. Enabled: User can disable or enable port control for Ports 1 ~ 8. Port 9 is permanently enabled and cannot be disabled.
2. Auto Negotiate: Ports 1 ~ 9 are disabled: Port 9 (GBIC port) is enabled.
3. Speed/Duplex Config: Ports 1 ~ 8 (100 Mbps Fiber port) can be set as Full or Half duplex; Port 9 (GBIC port) supports 1000Mbps Full Duplex only.
4. Flow Control: Users can enable or disable flow control function (only for Ports 1 ~ 8); Port 9 (GBIC port) always supports flow control.
5. Group: User can set trunking groups for Port 1 ~ 8 (up to four groups). Port 9 is not available for trunking.

FE-8F1GM Managed Switch : Port Configuration

Port	Type	Enabled	Auto Negotiate	Speed/Duplex Config	Flow Control	Group
1.	100FX	Yes	Disabled	100 Full	On	
2.	100FX	Yes	Disabled	100 Full	On	
3.	100FX	Yes	Disabled	100 Full	On	
4.	100FX	Yes	Disabled	100 Full	On	
5.	100FX	Yes	Disabled	100 Full	On	
6.	100FX	Yes	Disabled	100 Full	On	
7.	100FX	Yes	Disabled	100 Full	On	
8.	100FX	Yes	Disabled	100 Full	On	
9.	1000FX	Yes	Enabled	1000 Full	On	

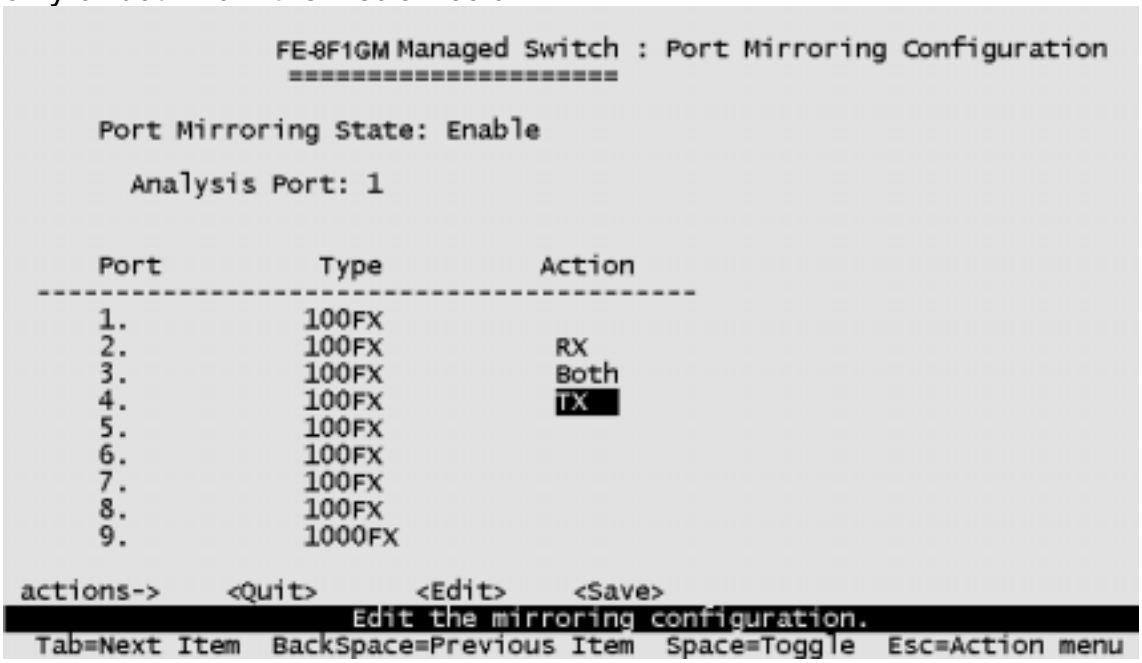
Actions->
<Quit>: Exit the port configuration page and return to previous menu.
<Edit>: Configure all items. When finished with configuration, press **ESC** to go back to action menu line.
<Save>: Save all configured values.

4-3-3. Port Mirroring Configuration

Port Mirroring is a method of monitoring traffic in switched networks. Port traffic can be monitored through one specific port. For instance, traffic going in and out of monitored ports will be duplicated into a monitoring port. Press **Space** key to change configuration of each item.

1.Port Mirroring State: Press **Space** key to enable and disable.
2.Analysis Port: Port used to monitor traffic on a specific port.

3. Port: The ports you want to monitor. All monitored port traffic will be copied to a single port. You can select up to 9 ports to monitor. Users can choose to monitor receiving (RX) frames only or transmission (TX) frames only or both from the **Action** column.



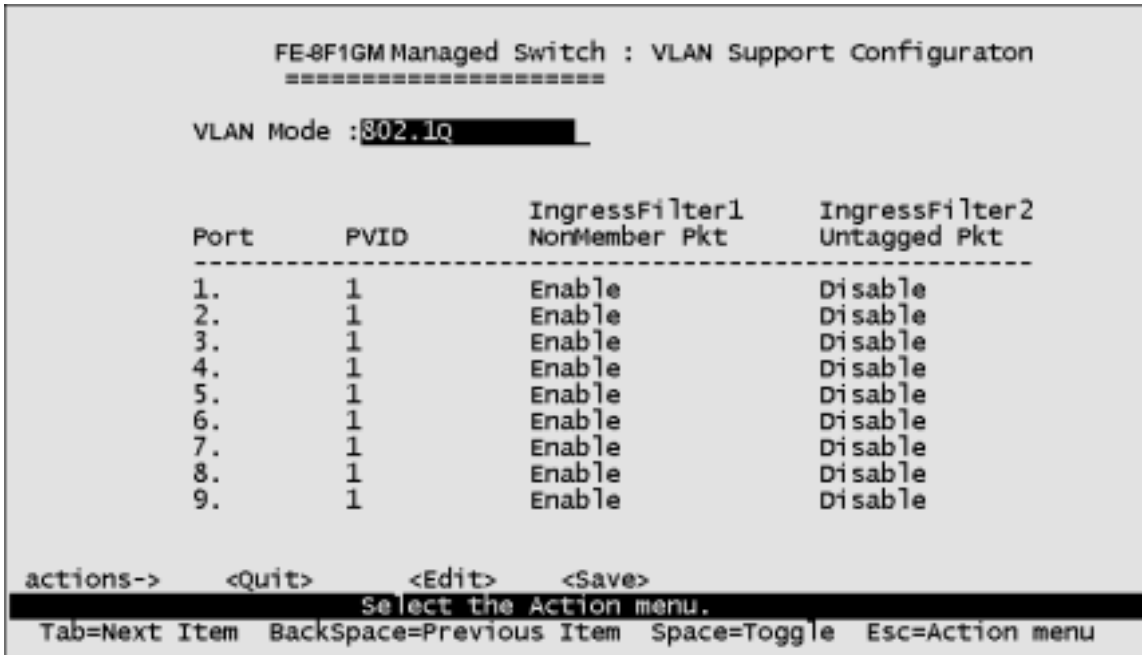
Actions->
<Quit>: Exit the Port Monitoring configuration page and return to previous menu.
<Edit>: Configures all items. When finished configuration, press **ESC** to go back to action menu line.
<Save>: Save all configured value.

4-3-4. VLAN Configuration

4-3-4-1. VLAN Configuration

1. PVID (Port VID): Sets the VLAN port ID that will be assigned to untagged traffic on a given port. This feature is useful for accommodating devices that you want to participate in the VLAN but don t support tagging. Only one untagged VLAN is allowed per port.
2. Ingress Filter 1: It matches the web Ingress Filtering Rule 1. It forwards only packets with VIDs matching this port s configured VID. Press **Space** key to forward or drop the frames whose VIDs do not match this port s VID.
3. Ingress Filter 2: It matches the web Ingress Filtering Rule 2. It drops untagged frames.

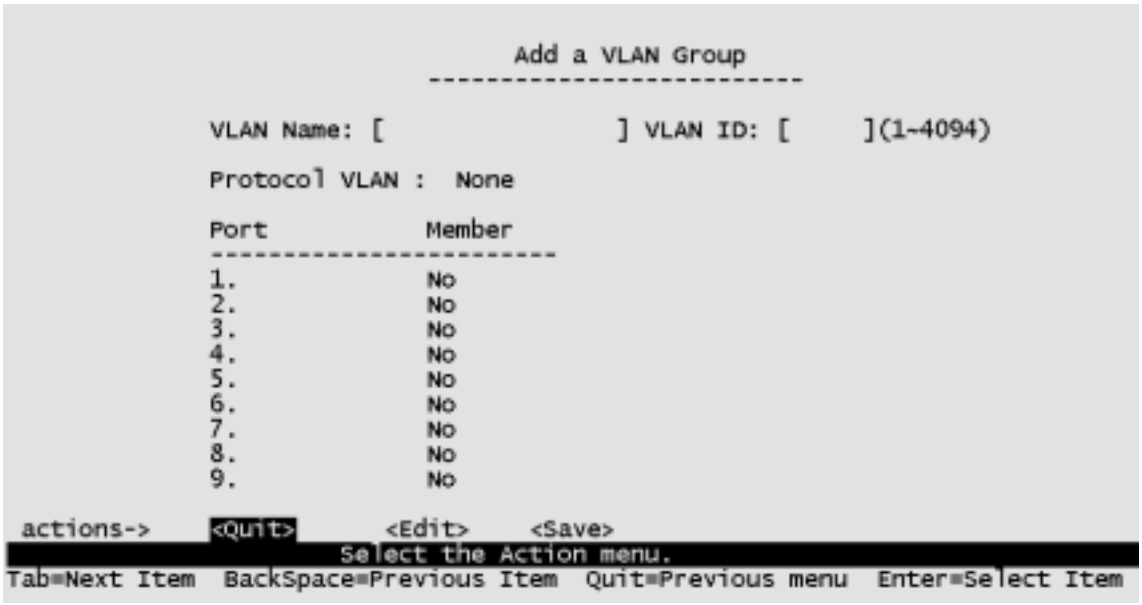
Press **Space** key to drop or forward untagged frames.


FE-8F1GM Managed Switch : VLAN Support Configuraton
VLAN Mode :802.1Q
Port PVID IngressFilter1 NonMember Pkt IngressFilter2 Untagged Pkt
1. 1 Enable Disable
2. 1 Enable Disable
3. 1 Enable Disable
4. 1 Enable Disable
5. 1 Enable Disable
6. 1 Enable Disable
7. 1 Enable Disable
8. 1 Enable Disable
9. 1 Enable Disable
actions-> <Quit> <Edit> <Save>
Select the Action menu.
Tab=Next Item BackSpace=Previous Item Space=Toggle Esc=Action menu

4-3-4-2. Create a VLAN Group

Create a VLAN and add tagged /untagged member ports to it.

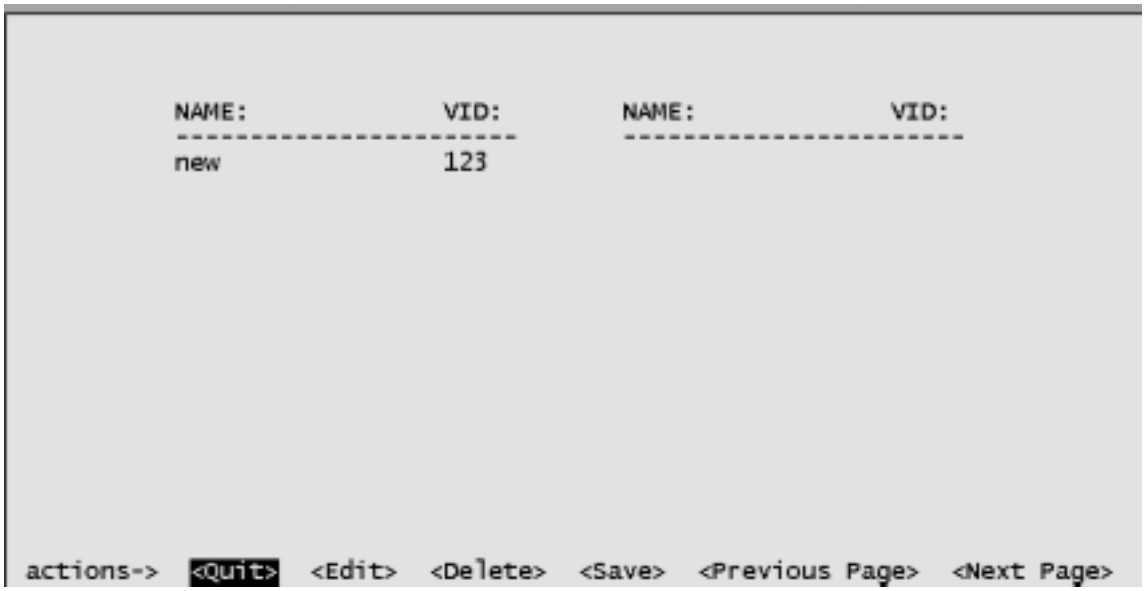
1. VLAN Name: Type a name for the new VLAN.
2. VLAN ID: Type a VID (between 1 ~ 4094). The default is 1.
3. Protocol VLAN: Press **Space** key to choose protocol type.
4. Mode: Press **Space** key to choose VLAN member. There are three types: 802.1Q, 802.1Q with GVRP, and Port Base.
UnTagged: the member port is an untagged port.
Tagged: the member port is a tagged port.
NO: The port is not member of this VLAN group.



Actions->
<Quit>: Exit this page and return to previous menu.
<Edit>: Configure all items. When finished configuration, press **ESC** to go back action menu line.
<Save>: Save all configured values.

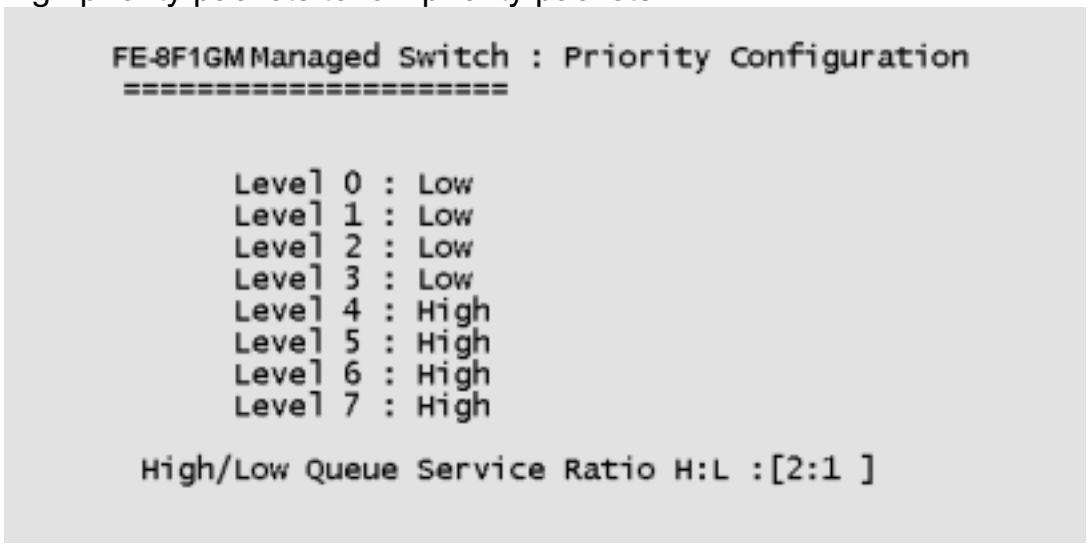
4-3-4-3. Edit / Delete a VLAN Group

On this page, user can edit or delete a VLAN group.
1.Press **<Edit>** or **<Delete>** item.
2.Choose the VLAN group that you want to edit or delete and then press **enter**.
3.Users can modify the VLAN item protocol and remove some member ports from this VLAN group.
4.After editing or deleting a VLAN, press **<Save>** key to save all configured values.
NOTE: 1.The VLAN Name and VLAN ID cannot be modified here.
2.The default VLAN cannot be deleted.



4-3-5. Priority Configuration

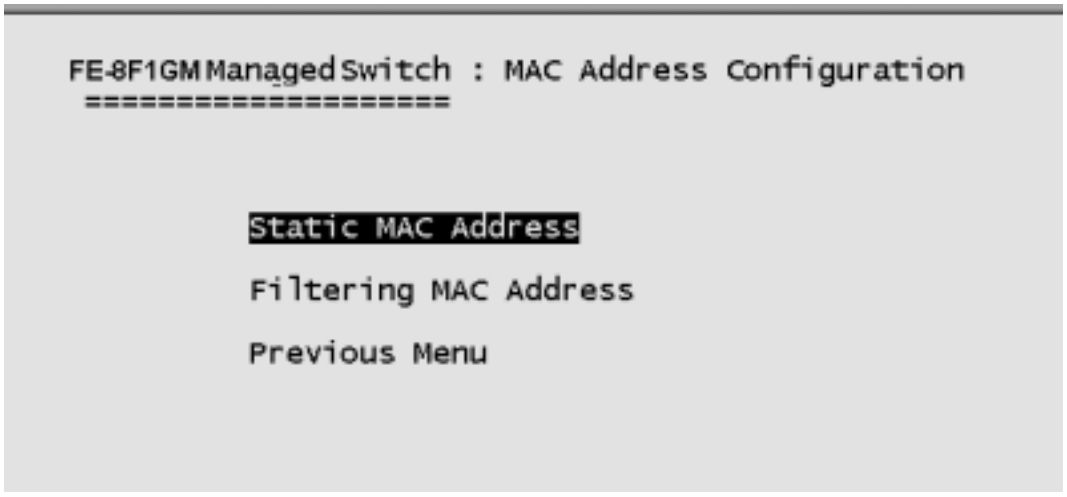
1.There are 7 priority levels (0 ~ 7) to map to high or low queue.
2.High/Low Queue Service Ration H/L: Users can select the ratio of high priority packets to low priority packets.


FE-8F1GM Managed Switch : Priority Configuration
Level 0 : Low
Level 1 : Low
Level 2 : Low
Level 3 : Low
Level 4 : High
Level 5 : High
Level 6 : High
Level 7 : High
High/Low Queue Service Ratio H:L :[2:1]

Actions->
<Edit>: Configures all items. When finished with configuration. Press **ESC** to go back to action menu line.
<Save>: Save all configure values.
<Quit>: Exit this page and return to previous menu.
High Low Queue service ratio: 1:1, 2:1, 3:1, 4:1, 5:1, 6:1, 7:1, FIFO, H Ł L
First In First Out (FIFO): The sequence of packets sent depends on arrival order.
High to Low (H Ł L): All high priority packets are sent before low priority packets.

Ratio (1:1, 2:1, 3:1, 4:1, 5:1, 6:1, 7:1)**:** Select the preference given to packets in the switch's high-priority queue.
These options represent the number of high priority packets sent before one low priority packet is sent. For example, 2 High: 1 Low means that the switch sends 2 high priority packets before sending 1 low priority packet.

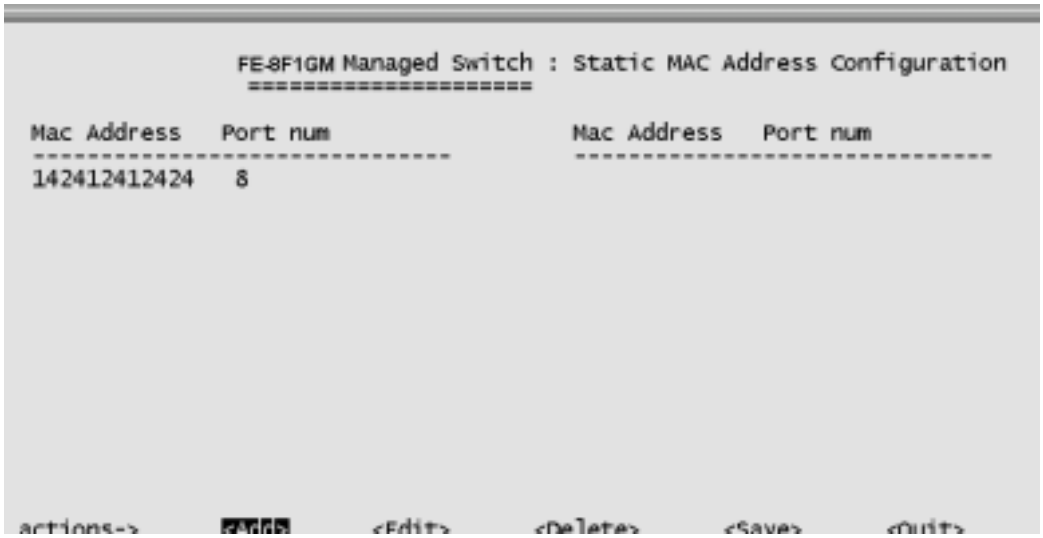
4-3-6. MAC Address Configuration



4-3-6-1. Static MAC Address

When you add a static MAC address, it remains in the switch's address table regardless of whether the device is physically connected to the switch. This saves the switch from having to re-learn a device's MAC address when it is reconnected or active on the network again.

In this page user can add, modify, or delete a static MAC address.



Add static MAC address

1. Press **<Add> --> <Edit>** key to add a static MAC or edit an address.
2. Enter the MAC address which the port should permanently forward traffic to and from, regardless of the device s network activity.
3. In the **Port num** item, enter the port number.
4. If tag-based (802.1Q) VLAN is set up on the switch, static addresses are associated with individual VLANs. Type the VID to associate with the MAC address.
5. Press **ESC** to go back to the action menu line and then select **<Save>** to save all configured values.

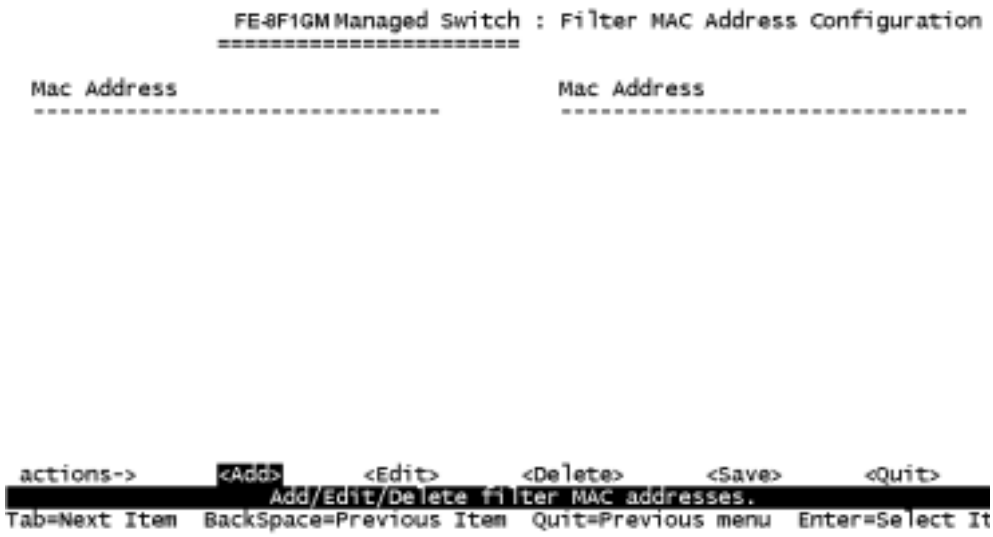
Edit static MAC address

1. Press **<Edit>** key to modify a static MAC address.
2. Choose the MAC address that you want to modify and then press **enter**.
3. Press **<Edit>** key to modify all the items.
4. Press **ESC** to go back to the action menu line and then select **<Save>** to save all configured values.

Delete static MAC address

1. Press **<Delete>** key to delete a static MAC address.
2. Choose the MAC address that you want to modify and then press **enter**.
3. After deleting static MAC address, press **<Save>** to complete the deleting operation.

4-3-6-2. Filtering MAC Address



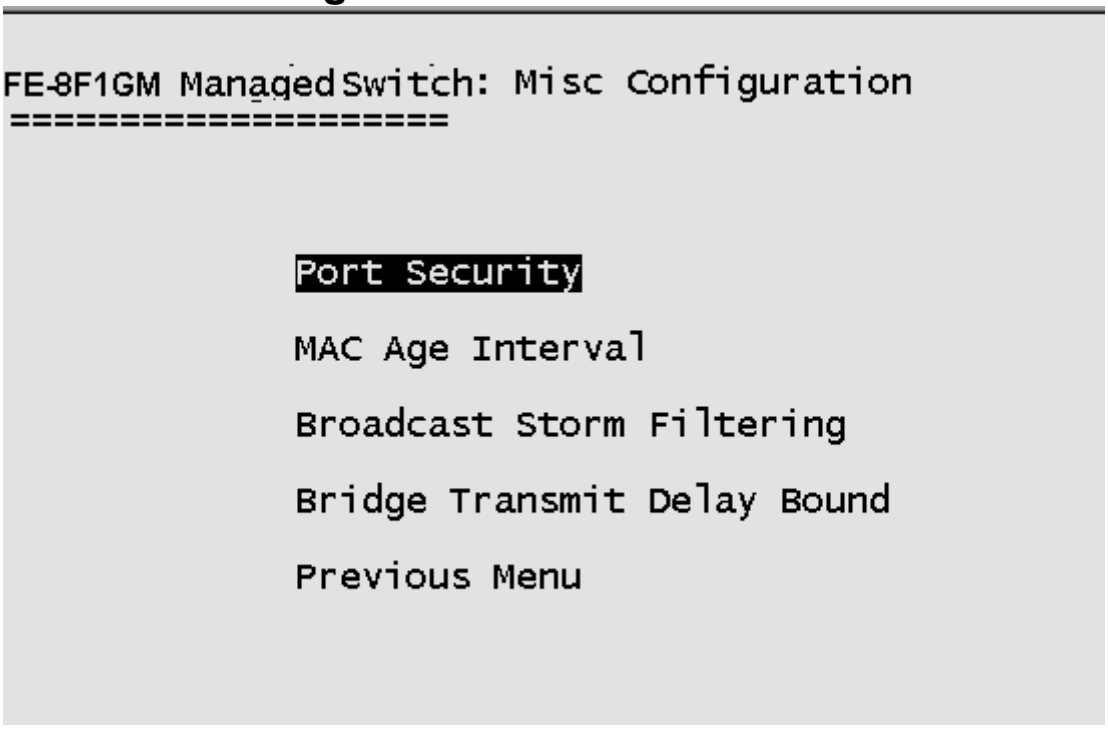
Edit Filtering MAC address

1. Press **<Edit>** key to modify a static Filtering address.
2. Choose the MAC address that you want to modify and then press **enter**.
3. Press **<Edit>** key to modify all the items.
4. Press **ESC** to go back to the action menu line and then select **<Save>** to save all configured values.

Delete Filtering MAC address

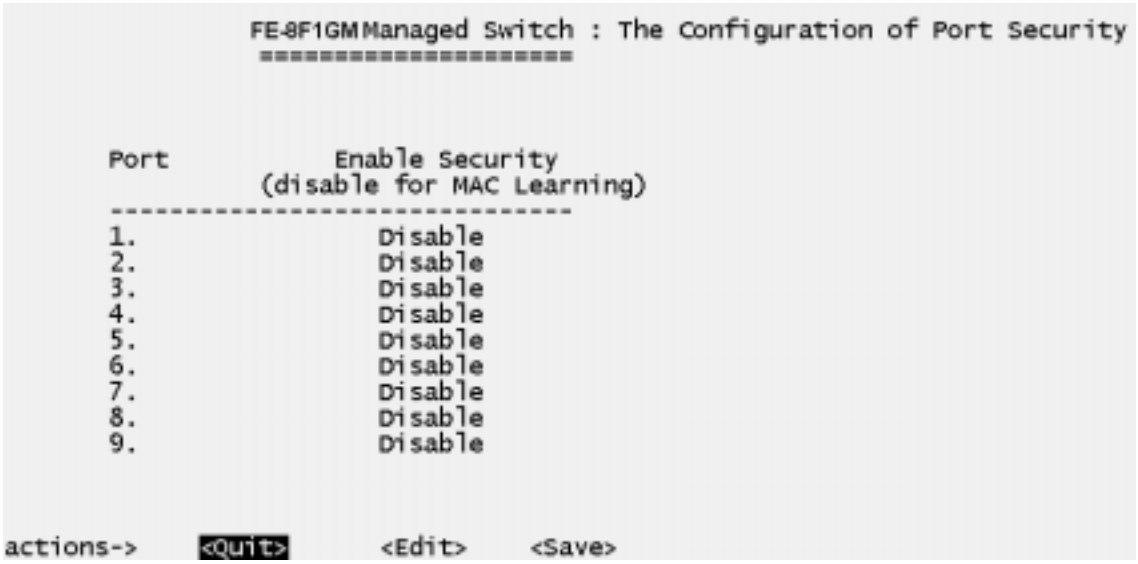
1. Press **<Delete>** key to delete a Filtering MAC address.
2. Choose the MAC address that you want to delete and then press **enter**.
3. After deleting the Filtering MAC address, press **<Save>** to complete the operation.

4-3-7. Misc Configuration



4-3-7-1. Port Security

A port in security mode will be locked without address learning permission. Only the incoming packets with SMAC already existing in the address table can be forwarded normally. Users can disable the port from learning any new MAC addresses, then use the static MAC addresses screen to define a list of MAC addresses that can use the secure port.



1. Press **<Edit>** to enable or disable the port security.
2. Press **Space** key to choose Enable / Disable item.

3. Press **ESC** to go back to the action menu line and then select **<Save>** to save all configured values.

4-3-7-2. MAC Age Interval

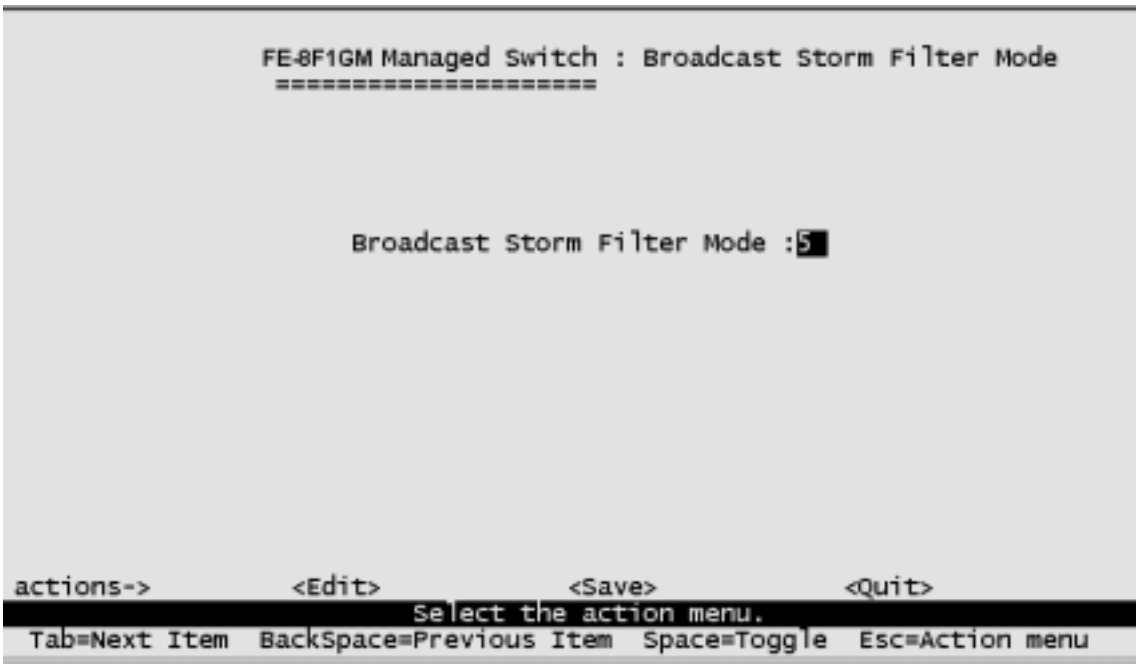
Type the number of seconds that an inactive MAC address remains in the switch s address table. The valid range is 300 ~ 765 seconds. Default is 300 seconds.

FE8F1GM Managed Switch : The Configuration of Aging Time
NAC Age Interval (sec) [300] : 300 (0,300~765)
tions-> <Edit> <Save> <Quit>
Select the action menu.
=Next Item BackSpace=Previous Item Quit=Previous menu Enter=Select Item

Actions->
<Edit>: Configure all items. When finished configuring, press **ESC** to go back to the action menu line.
<Save>: Save all configured values.
<Quit>: Exit this page and return to previous menu.

4-3-7-3. Broadcast Storm Filtering

This page configures broadcast storm control. Press **<Edit>** to configure the broadcast storm filter mode.
Press **Space** key to choose the threshold value. The valid threshold values are 5%, 10%, 15%, 20%, 25%, and NO (None).

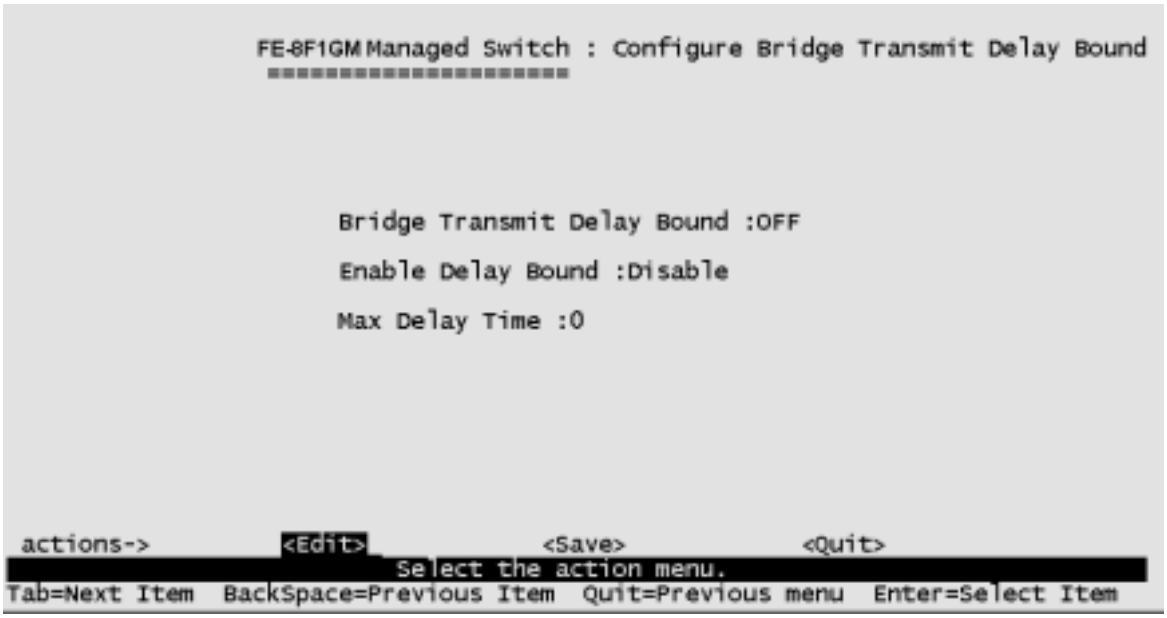

FE-8F1GM Managed Switch : Broadcast Storm Filter Mode
Broadcast Storm Filter Mode :5
actions-> <Edit> <Save> <Quit>
Select the action menu.
Tab=Next Item BackSpace=Previous Item Space=Toggle Esc=Action menu

Actions->
<Edit>: Configure all items. When finished configuring, press **ESC** to go back to the action menu line.
<Save>: Save all configured values.
<Quit>: Exit this page and return to previous menu.

4-3-7-4. Max bridge transmit delay bound

Max bridge transmit delay bound (0,1 - 4 sec): Limits a packets queuing time in the switch. If enabled, the packets exceeding the queuing time will be dropped. Press **Space** key to set the time. The valid values are 1 sec, 2 sec, 4 sec and off. Default is 1 second.

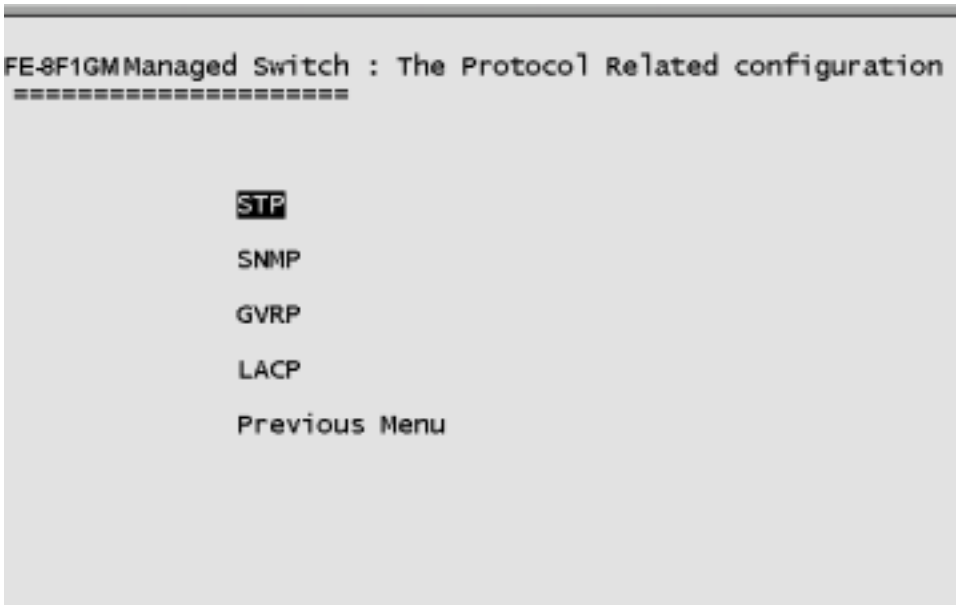
Enable Delay Bound: Limits the queuing time of low priority packets in the switch. If enabled, the low priority packets exceeding the Max Delay Time will be sent. Press the **Space** key to enable or disable this function.
Max Delay Time: Sets the low priority packet queuing time. The valid range is 0 ~ 255 ms.
NOTE: Max bridge transit delay bound control must be enabled before enabling Delay Bound.


FE-8F1GM Managed Switch : Configure Bridge Transmit Delay Bound
Bridge Transmit Delay Bound :OFF
Enable Delay Bound :Disable
Max Delay Time :0
actions->
<Edit>
<Save>
<Quit>
Select the action menu.
Tab=Next Item BackSpace=Previous Item Quit=Previous menu Enter=Select Item

Actions->
<Edit>: Configure all items. When finished configuring, press **ESC** to go back to the action menu line.
<Save>: Save all configured values.
<Quit>: Exit this page and return to previous menu.

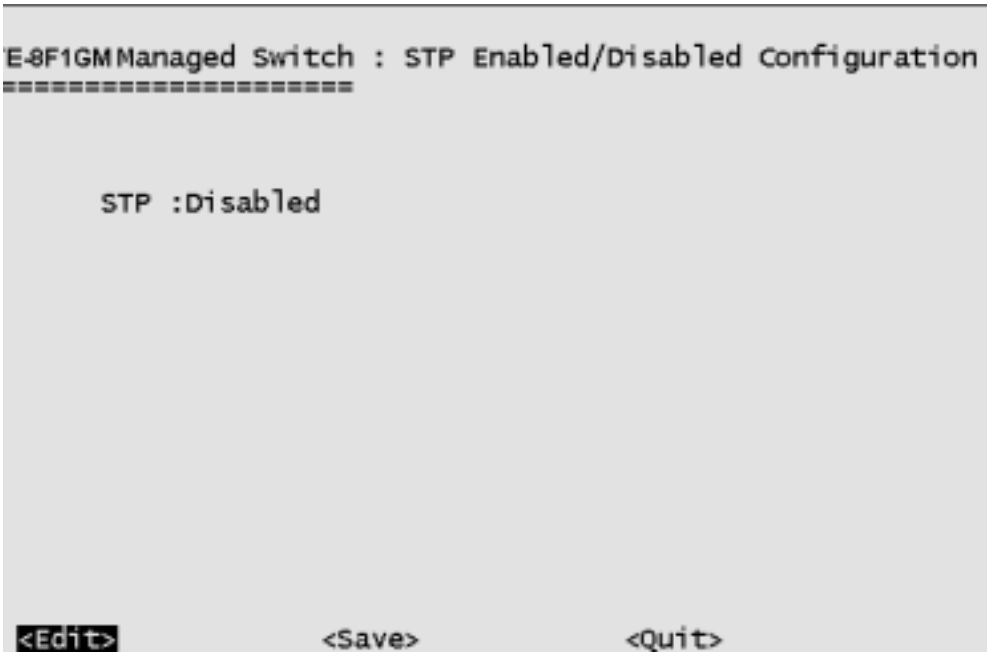
4-4. Protocol Related Configuration

4-4-1. STP

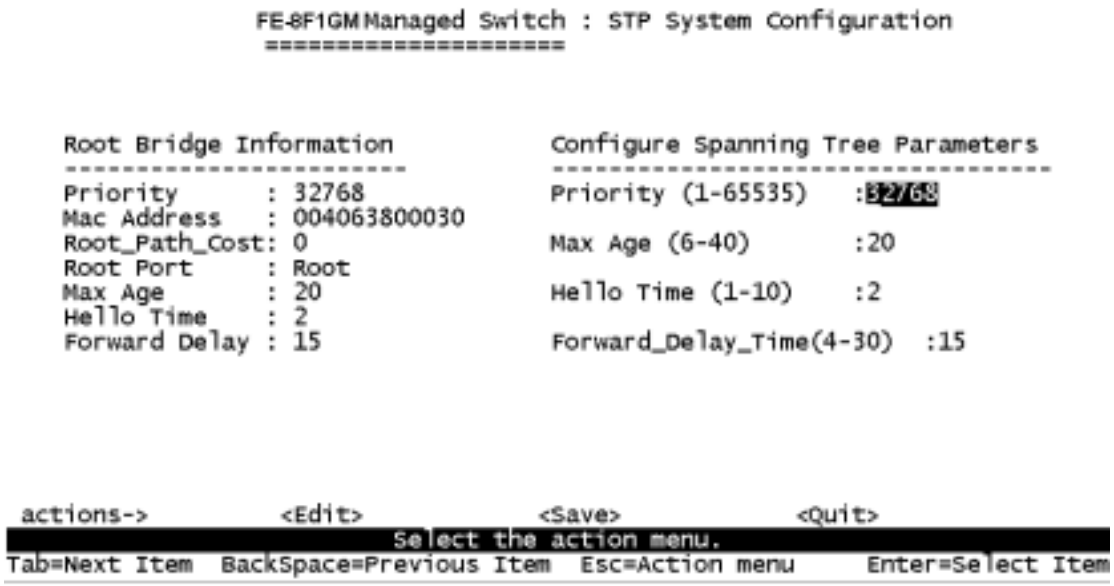


4-4-1-1. STP Enable

This page enables or disables the Spanning Tree function. Press **Space** key to select enabled or disabled.



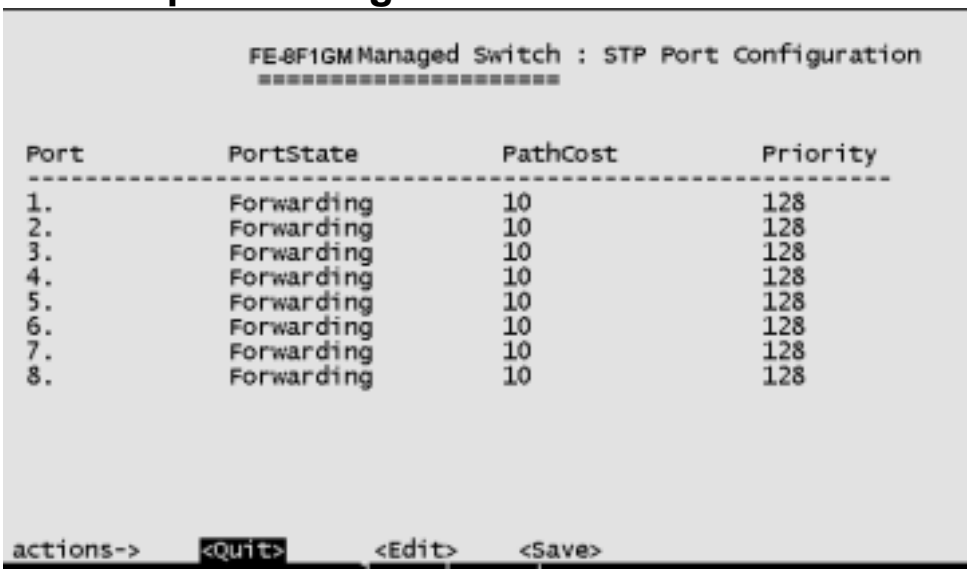
4-4-1-2. System Configuration



1. You can view Spanning Tree information about the Root Bridge on the left.
2. On the right, users can set new values for STP parameters.

You must enable STP functions to select configuration menu.

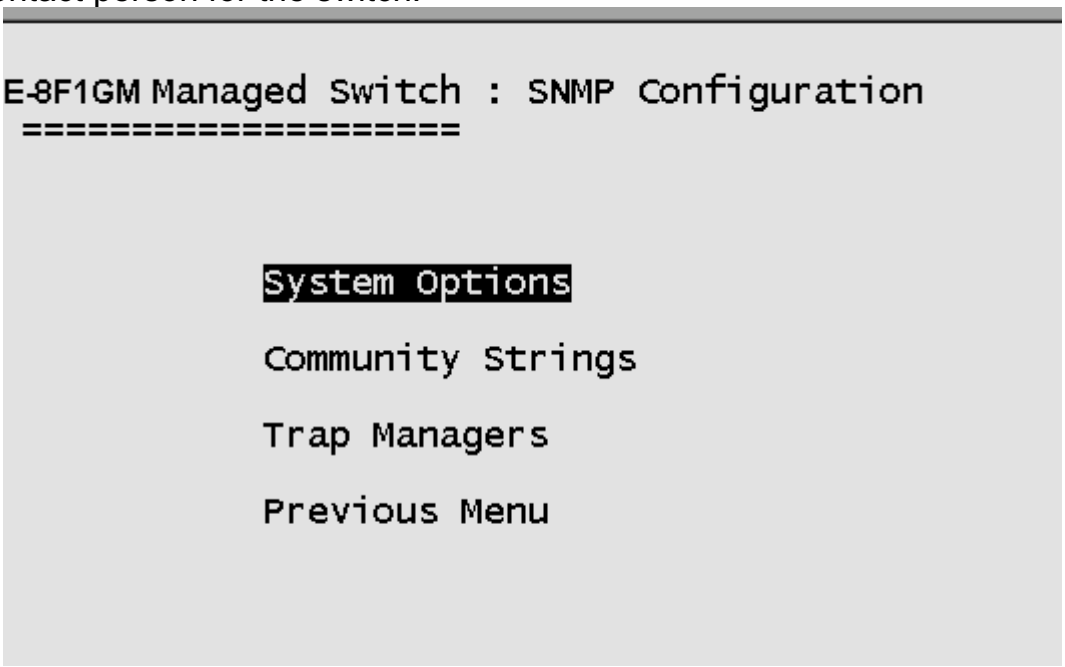
4-4-1-3. Perport Configuration


FE-8F1GM Managed Switch : STP Port Configuration
Port PortState PathCost Priority
1. Forwarding 10 128
2. Forwarding 10 128
3. Forwarding 10 128
4. Forwarding 10 128
5. Forwarding 10 128
6. Forwarding 10 128
7. Forwarding 10 128
8. Forwarding 10 128
actions-> <Quit> <Edit> <Save>

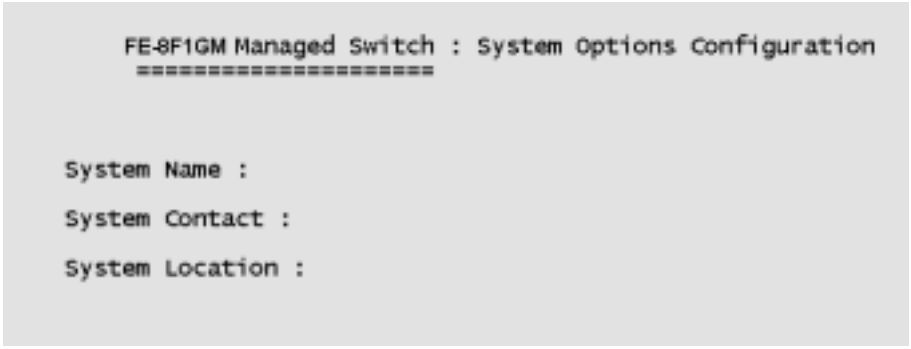
1. **PortState:** You can view switch Spanning Tree status for each port.
2. **PathCost:** Specifies the path cost of the port that the switch uses to determine which ports are the forwarding ports. If you change the value, restart the switch for the change to take effect.
3. **Priority:** This indicates Port Priority. You can make a port more or less likely to become the root port. If you change the value, restart the switch for the change to take effect.

4-4-2. SNMP

Use this page to define management stations as trap managers and to enter SNMP community strings. Users can also define a name, location, and a contact person for the switch.



4-4-2-1. System Options



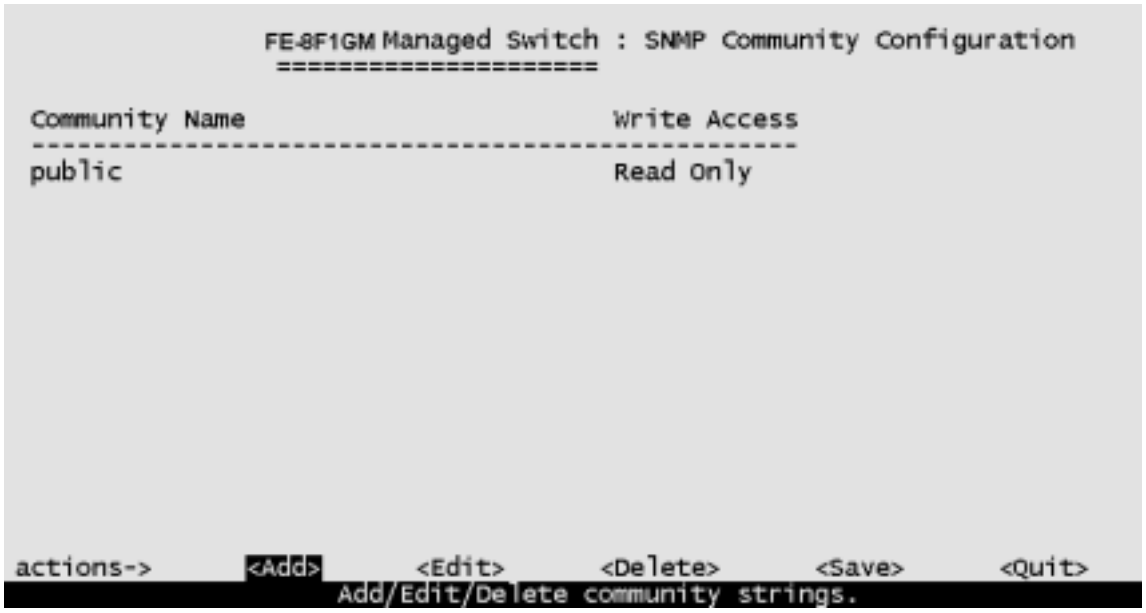
Press **<Edit>** to enter all items and then press **<Save>** to save configured values.

1. **System Name:** Type a name to be used for the switch.
2. **System Contact:** Type the name of contact person or organization.
3. **System Location:** Type the location of the switch.

4-4-2-2. Community Strings

Use this page to enter SNMP community strings.

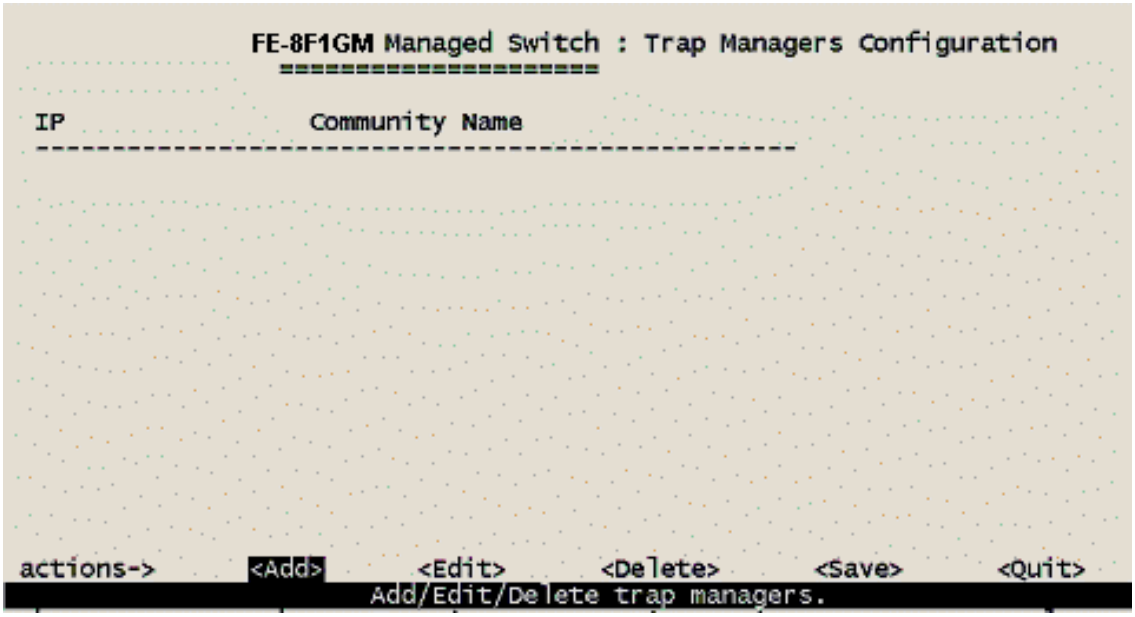
1. **Community Name:** Type the name of the current strings. Default is public
2. **Write Access:** Enables the rights as read only or read/write.
   Read only: Read only allows requests accompanied by this string to display MIB-object information.
   Read/Write: Read/write allows requests accompanied by this string to display MIB-object information and to set MIB objects.



Actions->
<Add>: Create a community string.
<Edit>: Modify all items. When finished configuration, press **ESC** to go back to the action menu line.
<Delete>: Delete a community string. After deleting item, press **<Save>** to complete the operation.
<Save>: Save all configured values.
<Quit>: Exit this page and return to previous menu.

4-4-2-3. Trap Managers

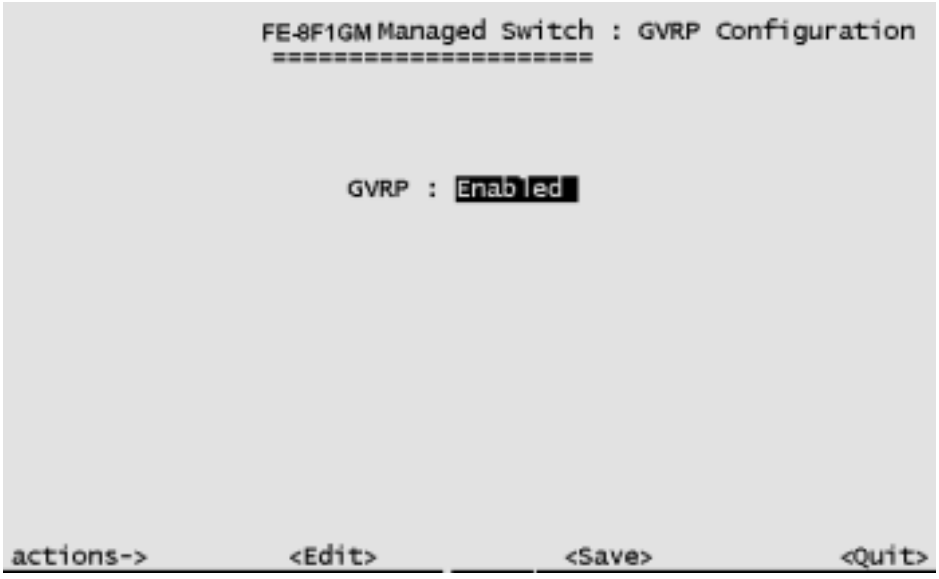
A trap manager is a management station that receives traps. Traps are system alerts generated by the switch. If no trap manager is defined, no traps are issued. Create a trap manager by entering the IP address of the station and a community string.



Actions->
<Add>: Create a trap manager.
<Edit>: Modify all items. When finished configuration, press **ESC** to go back to the action menu line.
<Delete>: Delete a trap manager. After deleting an item, press **<Save>** to complete the operation.
<Save>: Save all configured values.
<Quit>: Exit this page and return to previous menu.

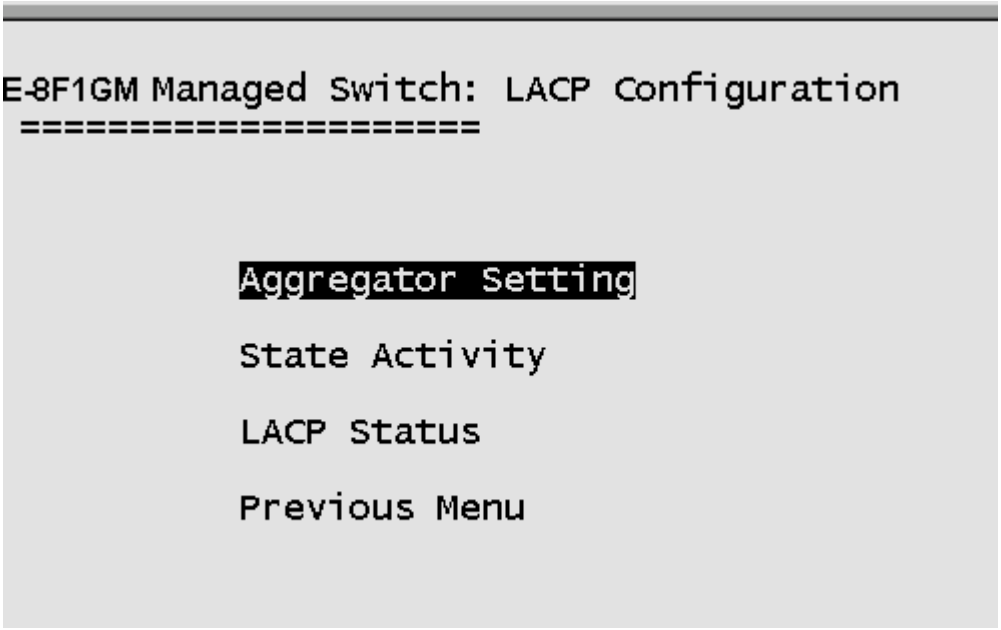
4-4-3. GVRP

This page enables / disables the GVRP (GARP VLAN Registration Protocol) support.
Press **Space** key to choose Enabled / Disabled.



Actions->
<Edit>: Modify all items. When finished configuration, press **ESC** to go back to the action menu line.
<Save>: Save all configured values.
<Quit>: Exit this page and return to previous menu.

4-4-4. LACP



4-4-4-1.Aggregator Setting

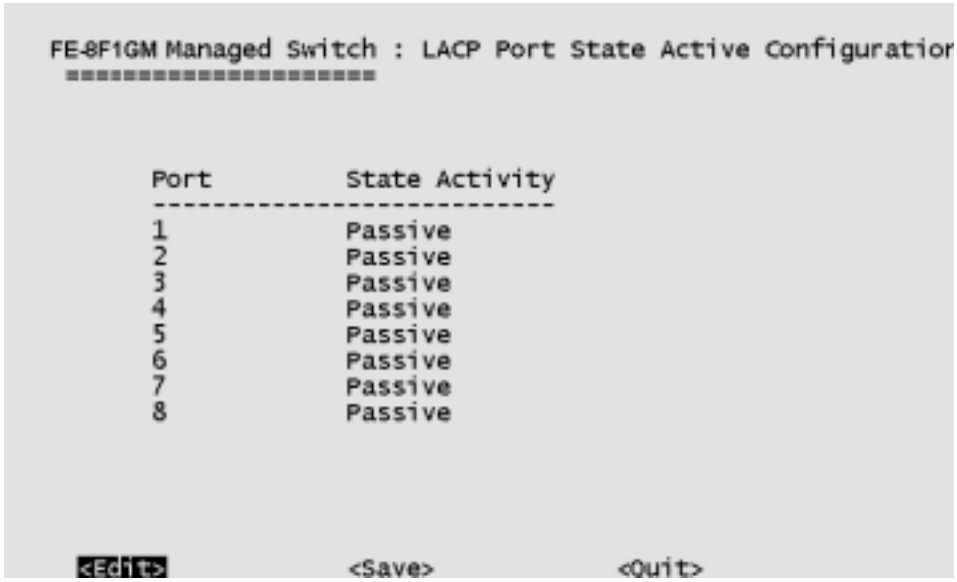
1.Group: Displays the trunk group ID.
2.LACP: Press **Space** key to enable or disable LACP (Link Aggregation Control Protocol) support. If enabled, the group is an LACP Static Trunking group. If disabled, the group is a Local Static Trunking group.
3.LACP Work Port Num: The maximum number of ports that can be aggregated at the same time. In an LACP Static Trunking group, all ports exceeding the number of group ports are standby and able to aggregate if the work ports fail. In a Local Static Trunking group, the number must be the same as the group ports.

NOTE: ***Before setting LACP support, set the trunking group on the Port / Trunk Configuration page.***

Actions->
<Edit>: Modify all items. When finished configuration, press **ESC** to go back to the action menu line.
<Save>: Save all configured values.
<Quit>: Exit this page and return to previous menu.

4-4-4-2. State Activity

Active: The port automatically sends LACP protocol packets.
Passive: The port does not automatically sends LACP protocol packets and responds only if it receives LACP protocol packets from the opposite device.



Actions->
<Edit>: Modify all items. When finished configuration, press **ESC** to go back to the action menu line.
<Save>: Save all configured values.

<Quit>: Exit this page and return to previous menu.

4-4-4-3. LACP Status

When setting a trunking group, relation information is here.

Actions->
<Quit>: Exit this page and return to previous menu.

4-5. Reboot Switch

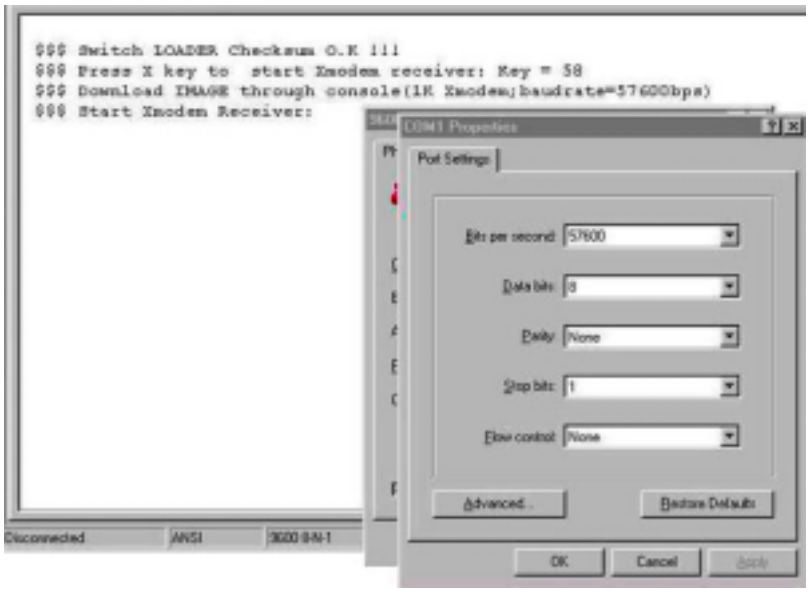
Default: Resets the switch to default configuration.
Restart: Reboots the switch using software reset.

Note: Wait for the message "**$$$ Press X key to start Xmodem receiver"** to appear before performing Default command or powering off the switch. Failure to do so may result in a System Parameter error.

Note: RS-232 Local console firmware upgrade (X modem)

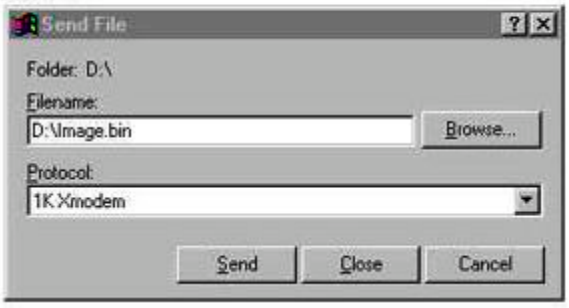
4. Press **X** key to start upgrading the Xmodem.
5. First, disconnect the terminal and modify baud rate to 57600bps, then reconnect.

```
$$$ Switch LOADER Checksum O.K !!!
$$$ Press X key to  start Xmodem receiver:
$$$ Download IMAGE through console(1K Xmodem;baudrate=57600bps)
$$$ Start Xmodem Receiver:
```



3.Select send file" under "transfer" menu from menu bar.
4.Press "browse" button to select the path.
5.Select "1K Xmodem" of protocol and press "Send" button.

```
$$$ Switch LOADER Checksum O.K !!!
$$$ Press X key to  start Xmodem receiver: Key = 58
$$$ Download IMAGE through console(1K Xmodem;baudrate=57600bps)
$$$ Start Xmodem Receiver:
```



6.After successfully upgrading the new firmware, please modify the baud rate to 9600bps.

```
$$$ Switch LOADER Checksum O.K !!!
$$$ Press X key to  start Xmodem receiver: Key = 78
$$$ Download IMAGE through console(1K Xmodem;baudrate=57600bps)
$$$ Start Xmodem Receiver: CCCCC
$$$ Download IMAGE ....O.K !!!
$$$ Update firmware ..........................................
..............................................................
..............................................................
..............................................................
.............................
$$$ Update firmware ....O.K !!!
$$$ Note: console baudrate of new image is 9600bps..
$$$ Reboot .....
```

5.
Web-Based Management

This section introduces the configuration and functions of the Web-based management of **SmartGST-801M**.
The **SmartGST-801M** provides an embedded HTML website residing in flash memory. It offers management feature and allows users to manage the switch from anywhere on the network through a standard Web Browser.

NOTE: For proper web management results with Windows 2000, use Internet Explorer versions 5.0 or higher.

Web Management Function

1. The Web Management Function provides a Web browser to manage and monitor the switch. The default values are as follows:

   IP Address: 192.168.16.1
   Subnet Mask: 255.255.255.0
   Default Gateway: 192.168.6.254
   User Name: **root**
   Password: **root**

   If you need change the IP address at initial use, use the console mode to modify it.

2. Type the URL http://192.168.16.1 and insert user name and password as

5-1. Web Management Home Overview

1. Home Page.

5-2. Port Status

1. port status

State: Displays port status ON or OFF depending on user setting. unlink will be treated as off .

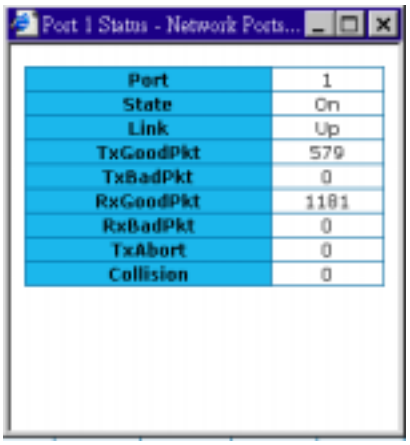
Link Status: DOWN is No Link , UP is Link

Auto Negotiation: auto negotiation mode

Speed status: Displays link speed, Port 1- 8 is 100Mbps, Port 9 is

Duplex status: Displays full-duplex or half-duplex mode.
Flow control: Displays Flow Control status enable or disable mode
Config: Displays the state of the user settings.
Actual: Displays the negotiation result.

User can see a single port counter as follows



Port Status

The following information provides a view of the current status of the unit.

Port Num	State		Link Status	Auto Negotiation		Speed Status		Duplex Status		Flow Control	
	Config	Actual		Config	Actual	Config	Actual	Config	Actual	Config	Actual
1	On	Off	Down	Off	Off	100	100	Full	Full	On	On
2	On	On	Up	Off	Off	100	100	Full	Full	On	On
3	On	Off	Down	Off	Off	100	100	Full	Full	On	On
4	On	Off	Down	Off	Off	100	100	Full	Full	On	On
5	On	Off	Down	Off	Off	100	100	Full	Full	On	On
6	On	Off	Down	Off	Off	100	100	Full	Full	On	On
7	On	Off	Down	Off	Off	100	100	Full	Full	On	On
8	On	Off	Down	Off	Off	100	100	Full	Full	On	On
9	On	Off	Down	Auto	Auto	1000	1000	Full	Full	On	On

5-3. Port Statistics

1. The following information provides a view of the current status of the unit.

Port Statistics

The following information provides a view of the current status of the unit.

Port	State	Link	TxGoodPkt	TxBadPkt	RxGoodPkt	RxBadPkt	TxAbort	Collision
1	Off	Down	1	0	7	0	0	0
2	On	Up	1451	0	3508	0	0	0
3	Off	Down	0	0	10	0	0	0
4	Off	Down	0	0	0	0	0	0
5	Off	Down	0	0	0	0	0	0
6	Off	Down	0	0	0	0	0	0
7	Off	Down	0	0	0	0	0	0
8	Off	Down	0	0	0	0	0	0
9	Off	Down	0	0	0	0	0	0

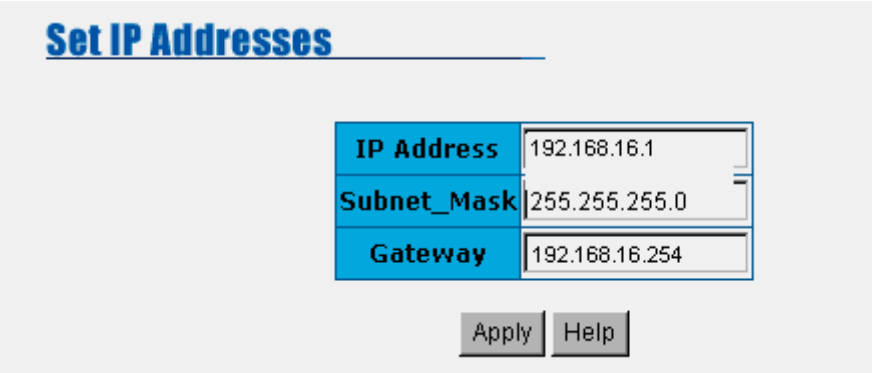
5-4. Administrator

Management functions include: IP address, Switch settings, Console port information, Port controls, Link aggregation, Filter database, VLAN Configuration, Spanning Tree, Port Mirror, SNMP, Security Manager, TFTP Update Firmware, Configuration Backup, Reset system, and Reboot.

5-4-1. IP Address

1. Users can configure the IP Settings and fill in the new values.
2. Reset switch and use new IP address to browser this web management.

Default IP: 192.168.16.1
Subnet_mask: 255.255.255.0
Gateway: 192.168.16.254



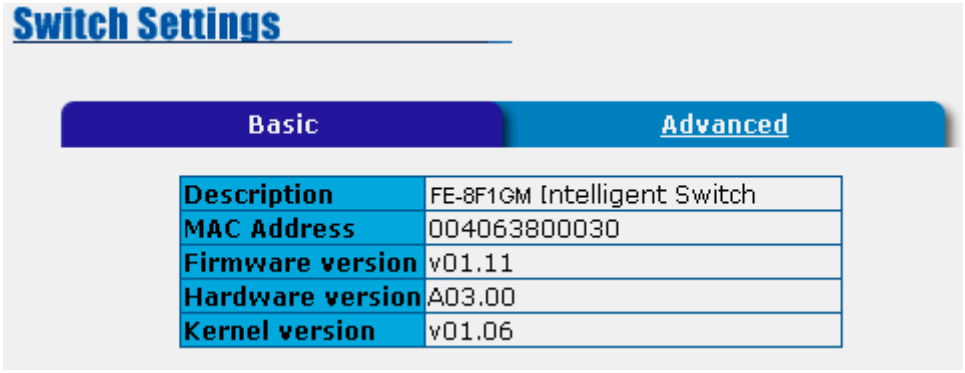
5-4-2. Switch Setting

5-4-2-1. Basic

1. **Description:** Displays the device name.
2. **MAC Address:** The unique hardware address assigned by manufacturer (default)
3. **Firmware Version:** Displays the switch s firmware

version.

4. **Hardware Version:** Displays the switch s Hardware version.
5. **Kernel version:** Displays default EEPROM value version.



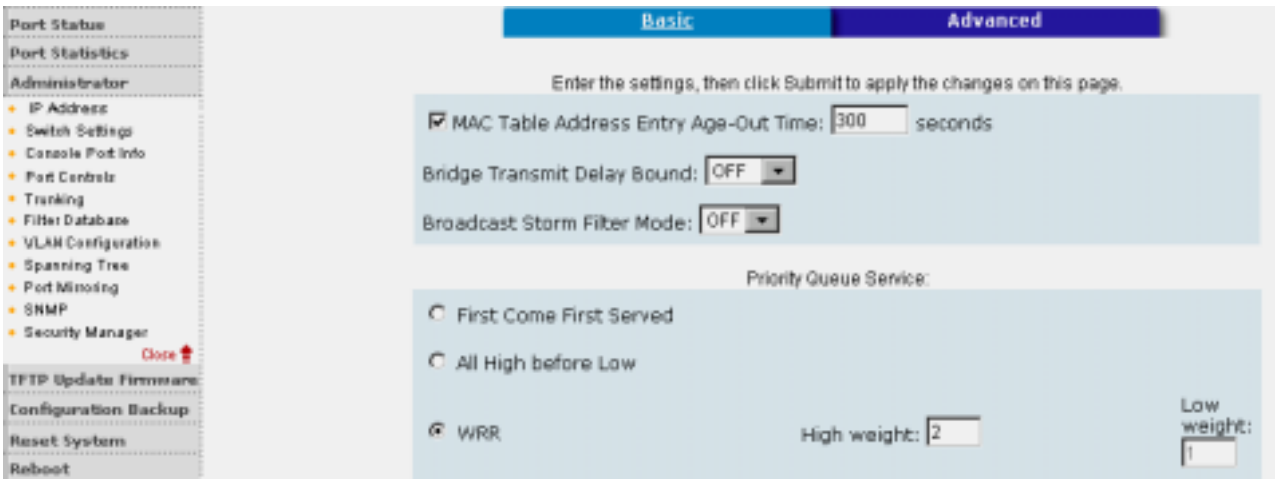
5-4-2-2. Advanced

Miscellaneous Setting:

MAC Address Age-out Time: Type the number of seconds that an inactive MAC address remains in the switch's address table. The valid range is 300 ~ 765 seconds. Default is 300 seconds.

Max bridge transit delay bound control: Limit the packet queuing time in switch. If enabled, the packets exceeding queuing time will be dropped. The valid values are 1 sec, 2 sec, 4 sec, and OFF. Default is 1 second.

Broadcast Storm Filter: To configure Broadcast Storm Control, enable it and set the upper threshold for individual ports. The threshold is the percentage of the port's total bandwidth used by broadcast traffic. When broadcast traffic for a port rises above the threshold you set, Broadcast Storm Control becomes active. The valid threshold value are 5%, 10%, 15%, 20%, 25%, and OFF.



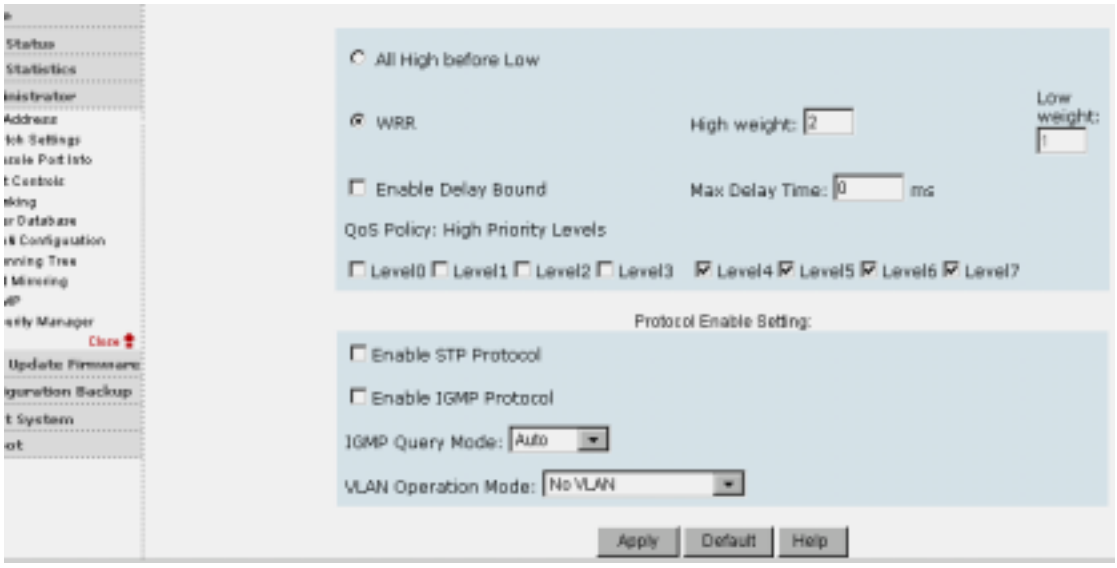
Priority Queue Service settings:
First Come First Service: The sequence of packets sent depends on arrival order.
All High before Low: All high priority packets sent before low priority packets.

Weighted Round Robin: Select the preference given to packets in the switch's high-priority queue.
These options represent the number of high priority packets sent before one low priority packet is sent. For example, 2 High: 1 Low means that the switch sends 2 high priority packets before sending 1 low priority packet.

Enable Delay Bound: Limits the queuing time for low priority packets. The default Maximum Delay Time is 255ms.
If the low priority packets stay in the switch over the Max Delay Time, they will be sent. The valid time range is 1 ~ 255 ms.

NOTE: Max bridge transit delay bound control must be enabled before enabling Delay Bound.

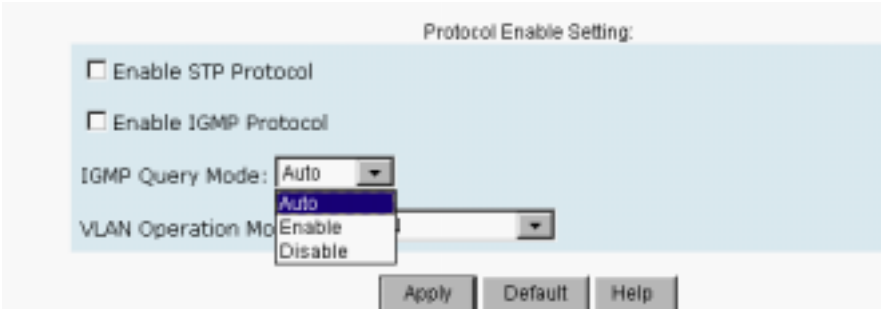
QoS Policy: High Priority Levels: 0 ~7 priority levels can map to high or low queue. When a frame's VLAN Tag number is mapping the priority level of the port; this frame can have high priority. (This QoS Policy is for the entire switch, not for a single port)



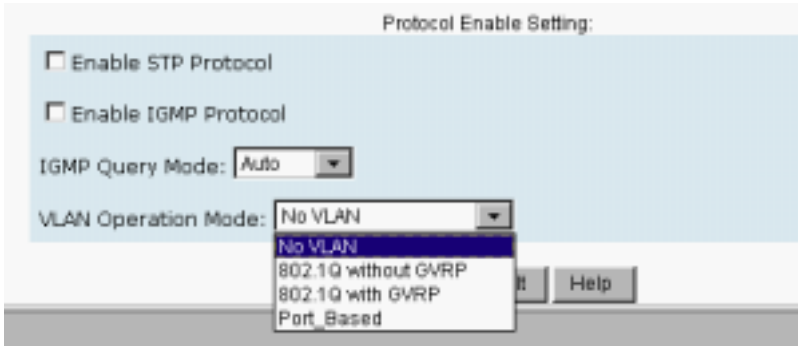
Protocol Enable Setting:
En. ble Sp. nning Tree Protocol: Def. ult recommended (. TP dis. bled)

Enable Internet Group Multicast Protocol: enable IGMP protocol
IGMP Query Mode: Recognize different queries from clients or servers to decide which query will be the first priority. The modes are as follows:

1. **Auto Mode**: Automatically chooses the switch with smallest IP address for the IGMP Query.
2. **Enable Mode**: Enable one of switches to be the IGMP Query.
3. **Disable Mode**: Disable the other switches from being the IGMP Query.

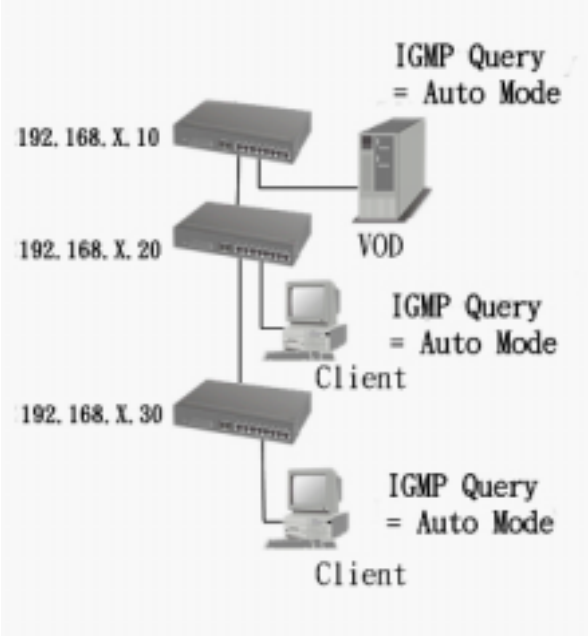


VLAN Operation Mode:
No VLAN (**Default**)
802.1Q (Tag VLAN) without GVRP VLAN mode
802.1Q (Tag VLAN) with GVRP VLAN mode
Port Based

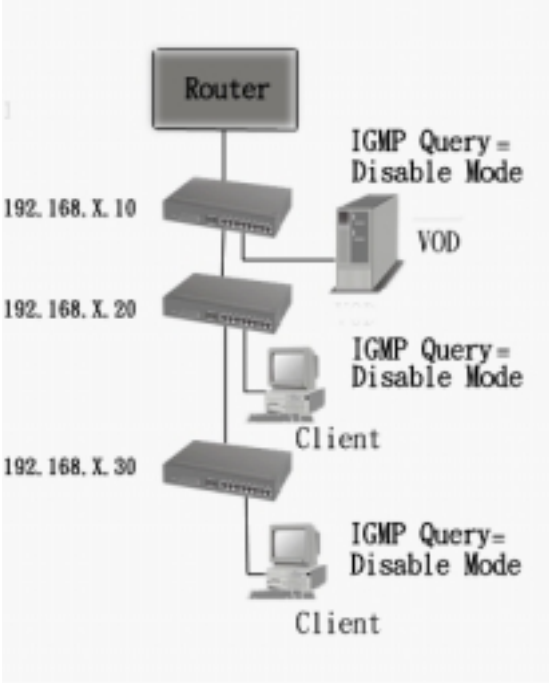


The three topologies shown below indicate how the IGMP Query works within a network:

1. This topology is set when the router s IP address is smaller than other Switches in the subnet.

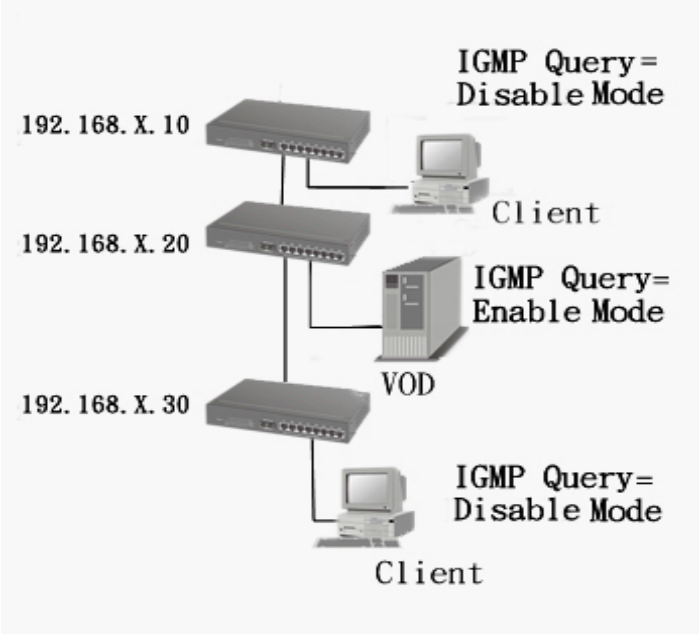


2. This topology is set when the router s IP address is larger than other Switches in the subnet.



Note: The **SmartGST-801M** supports IGMP protocol but IGMP must be enabled and the switch must be the querier.

3. This topology is used when the Switch s IP address is not the smallest in the subnet. If in Auto mode, the network will cause a Multi-cast Storm from the client IGMP report. The configuration is used to avoid that.



Note: We recommend that the switch with the smallest IP address be set as the VOD server.

4. All switches must be in Disable mode when the VOD server is set up as the IGMP Querier.

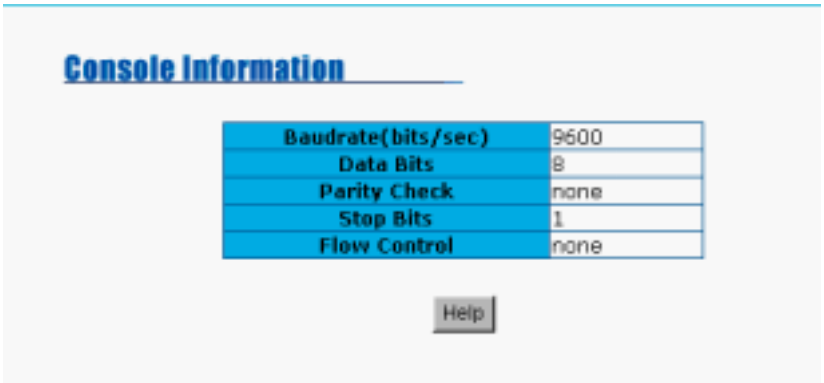
GVRP (GARP [Generic Attribute Registration Protocol] VLAN Registration Protocol)

GVRP allows automatic VLAN configuration between the switch and nodes. If the switch is connected to a device with GVRP enabled, you can send a GVRP request using the VID of a VLAN defined on the switch. The switch will automatically add that device to the existing VLAN.

5-4-3. Console Port Information

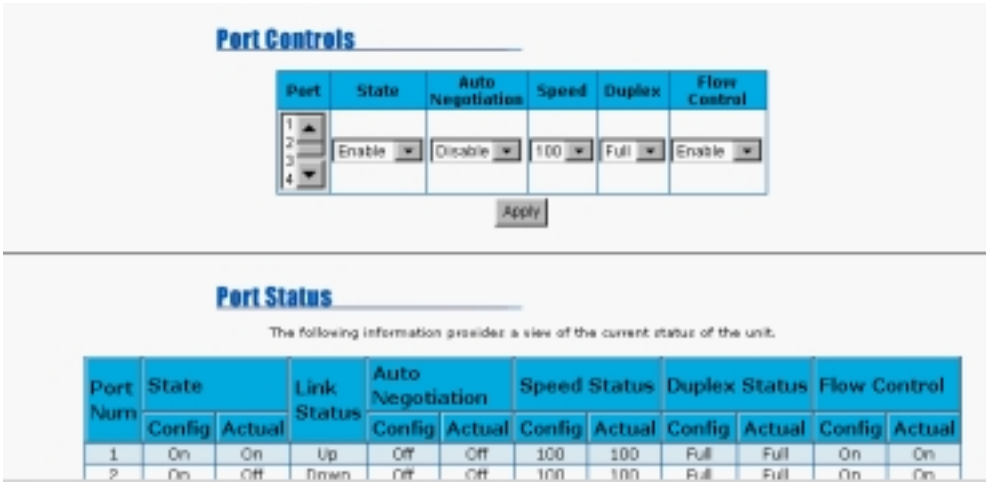
1. Console is a standard UART interface to communicate with Serial Port. Users can use the Windows HyperTerminal program to link to the switch. **Connect To -> Configure**

   Baud rate (bits/sec): 9600
   Data bits: 8
   Parity check: none
   Stop Bits: 1
   Flow control: none



5-4-4. Port Controls

Use this page to modify each port's status
State: User can disable or enable port 1-8. Port 9 is always enabled.
Auto Negotiation: Port 1-8 is fixed to disable mode and Port 9 is enabled.
Speed setting: The speed mode is fixed. 100Mbps (Ports 1-8), 1000Mbps (Port 9, GBIC port)
Duplex setting: Port 1-8 support Full or Half Duplex. Port 9 only supports Full Duplex.
Flow control setting: Port 1-8 can be enabled/disabled. Port 9 is always enabled.

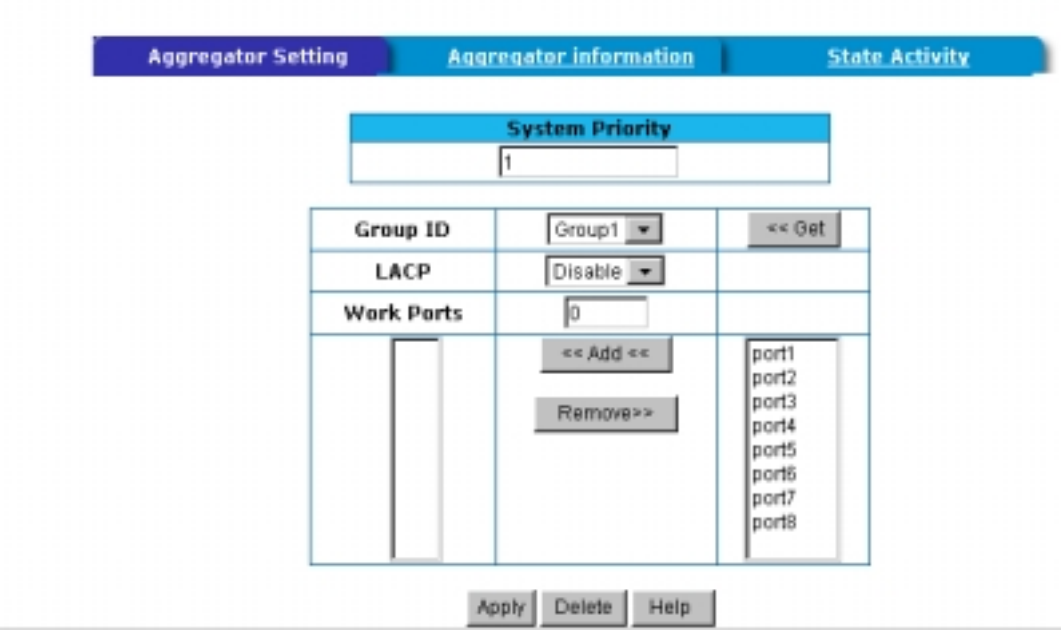

Port Controls
Port State Auto Negotiation Speed Duplex Flow Control
1 2 3 4
Enable Disable 100 Full Enable
Apply
Port Status
The following information provides a view of the current status of the unit.
Port Num State Link Status Auto Negotiation Speed Status Duplex Status Flow Control
Config Actual Config Actual Config Actual Config Actual Config Actual
1 On On Up Off Off 100 100 Full Full On On

5-4-5. Trunk

Port Trunking allows multiple devices with Link Aggregation Control instances to reach agreement on the identity of the Link Aggregation Group to which the links belong. Link aggregation lets you group up to eight consecutive ports into a single dedicated connection. This feature can expand bandwidth to a device on the network. **LACP operation requires full-duplex mode.** For more detail information, refer to IEEE 802.3ad.

5-4-5-1. Aggregator setting

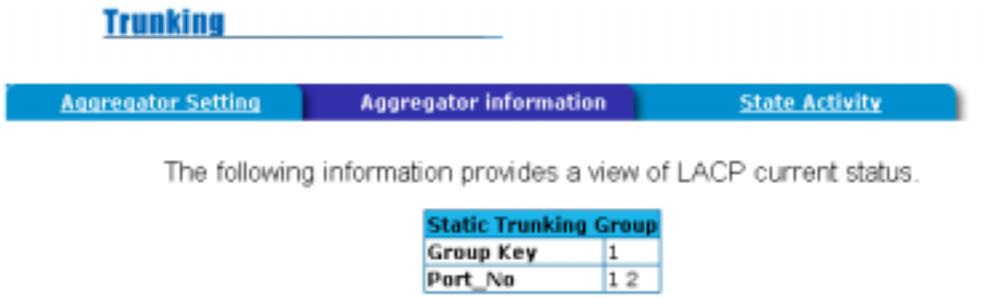
System Priority: A value used to identify the active LACP. The switch with the lowest value has the highest priority and is selected as the active LACP.



1. **Group ID:** Users can create a link aggregation across two or more ports. Choose the "group id" and click "Get".
2. **LACP:** If enabled, the group is a LACP static trunking group. If disabled, the group is local static trunking group.
3. All ports support LACP dynamic trunking group. If connecting to a device that also supports LACP, the LACP dynamic trunking group will be created automatically.
4. **Work Ports:** The maximum number of ports that can be aggregated at the same time is 4. If an LACP static trunking group is chosen, the exceeding ports are standby and able to aggregate if the work ports fail. If a local static trunking group, the number of ports must be the same as group ports.
5. Select the ports to join the trunking group. If LACP is enabled, users can configure the LACP Active/Passive status in each port.
6. Click Apply.

5-4-5-2. Aggregator Information

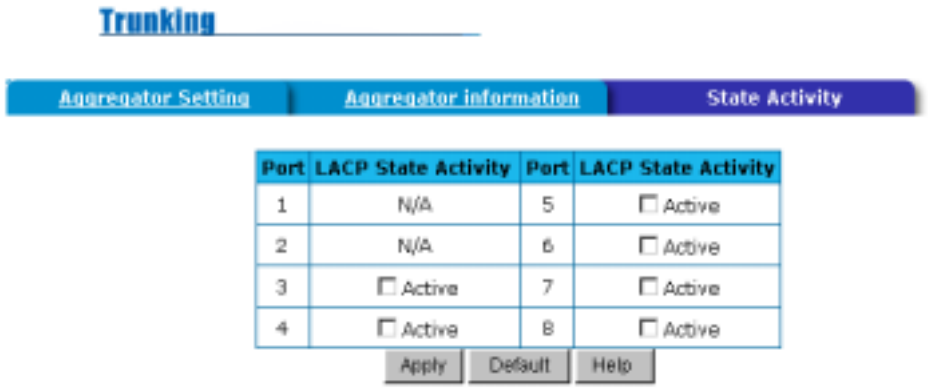
When setting an LACP aggregator, view relational information here.



5-4-5-3. State Activity

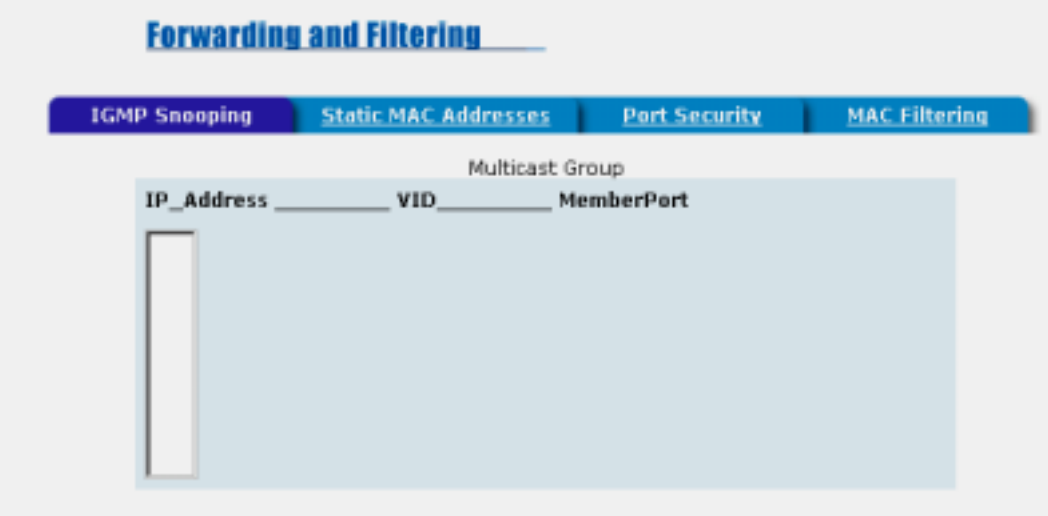
Active (selected)**:** The port automatically sends LACP protocol packets.
Passive (not selected)**:** The port does not automatically send LACP protocol packets and responds only if it receives LACP protocol packets from the opposite device.

1. A link having either two active LACP ports or one active port can perform dynamic LACP trunking. A link with two passive LACP ports will not perform dynamic LACP trunking because both ports are waiting for an LACP protocol packet from the opposite device.
2. If you are an active LACP actor, when you select trunking port the active status will be created automatically.



5-4-6. Filter Database

5-4-6-1. IGMP Snooping

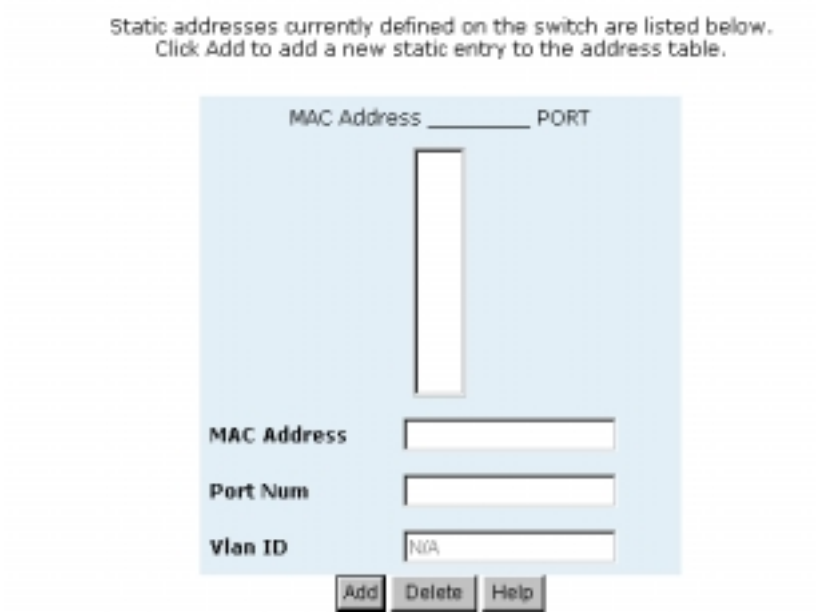


The **SmartGST-801M** supports IP Multicast. IGMP protocol can be enabled on the web management s Advanced page. On the IGMP Snooping information page, you can view different multicast groups, VIDs, and member ports. IP multicast addresses range from 224.0.0.0 through 239.255.255.255.

The Internet Group Management Protocol (IGMP) is an internal protocol of the Internet Protocol (IP) suite.
IP manages multicast traffic by using switches, routers, and hosts that support IGMP. Enabling IGMP allows the ports to detect IGMP queries, report packets, and manage IP multicast traffic through the switch. IGMP has three fundamental types of messages as follows:

Message	Description
Query	A message sent from the querier (IGMP router or switch) asking for a response from each host belonging to the multicast group.
Report	A message sent by a host to the querier to indicate that the host wants to be or is a member of a given group indicated in the report message.
Leave Group	A message sent by a host to the querier to indicate that the host has quit to be a member of a specific multicast group.

5-4-6-2. Static MAC Address



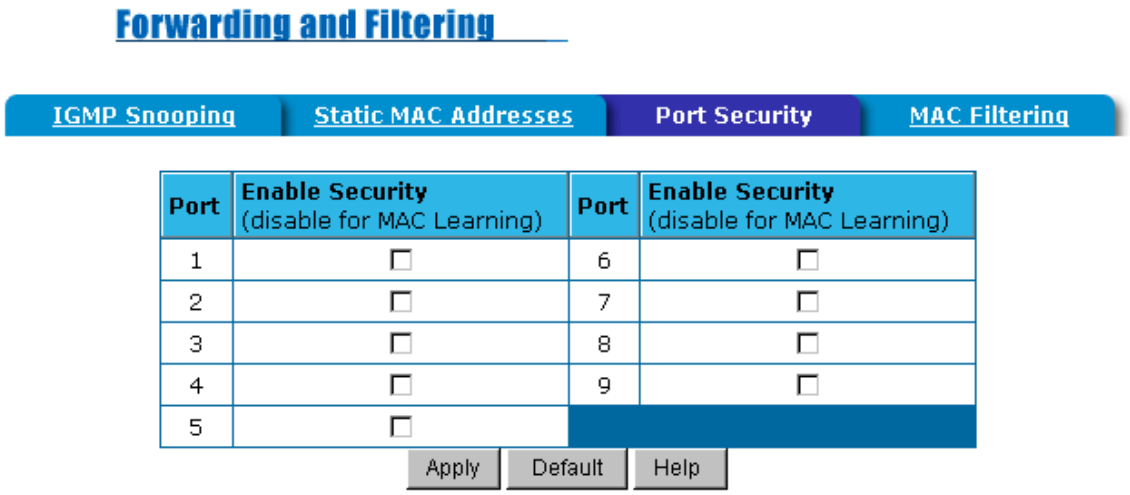
When you add a static MAC address, it remains in the switch's address table, regardless of whether the device is physically connected to the switch. This saves the switch from having to re-learn a device's MAC address when the device is disconnected or powered-off.

To add a static MAC address

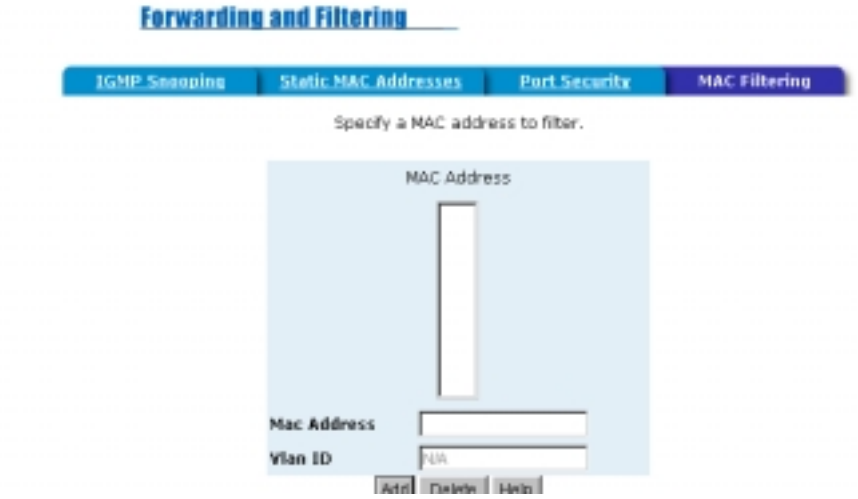
1. From the main menu, click administrator, then click Filter Database.
2. Click Static MAC Addresses. In the MAC address box, enter the MAC address of the port that should permanently forward traffic regardless of a device's network activity.
3. In the Port Number box, select a port number.
4. If tag-based (IEEE 802.1Q) VLANs are set up on the switch, static addresses are associated with individual VLANs. Type the VID (tag-based VLANs) to associate with the MAC address.
5. Click add

5-4-6-3. Port Security

A port in Security Mode will be locked without address learning permission. Only the incoming packets with SMAC already existing in the address table can be forwarded normally. Users can disable the port from learning any new MAC addresses and use the static MAC addresses screen to define a list of MAC addresses that can use the secure port. Enter the settings and click Submit to apply the changes on this page.



5-4-6-4. MAC Filtering



5-4-7. VLAN configuration

A Virtual LAN (VLAN) is a logical network grouping that limits the broadcast domain. It allows you to isolate network traffic so only members of the VLAN receive traffic from the same VLAN members. Basically, creating a VLAN from a switch is logically equivalent to physically connecting a group of network devices to another Layer 2 switch. However, all the network devices are still plugged into the original switch. The **SmartGST-801M** supports port-based and protocol-base VLAN in the Web Management page.

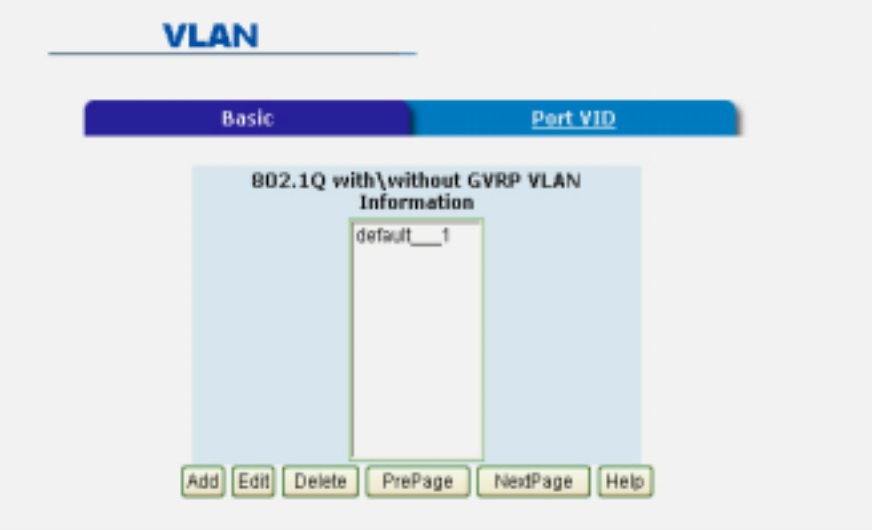
NOTE: The default VLAN cannot be deleted.

Support Port-based VLANs (IEEE 802.1Q VLAN)

Port-based Tagging rule VLAN is an IEEE 802.1Q specification standard. It is possible to create a VLAN across devices from different switch vendors. IEEE 802.1Q VLAN uses a technique to insert a tag into the Ethernet frames. Tags contain a VLAN Identifier (VID) that indicates the VLAN numbers.

Support Protocol-based VLAN
In order for an end station to send packets to different VLANs, it must be capable of either tagging packets it sends with VLAN tags or attach itself to a VLAN-aware bridge. The bridge must be capable of classifying and tagging the packets with a different VLAN ID based on not only default PVID but also other information about the packet, such as the protocol.

5-4-7-1. Basic

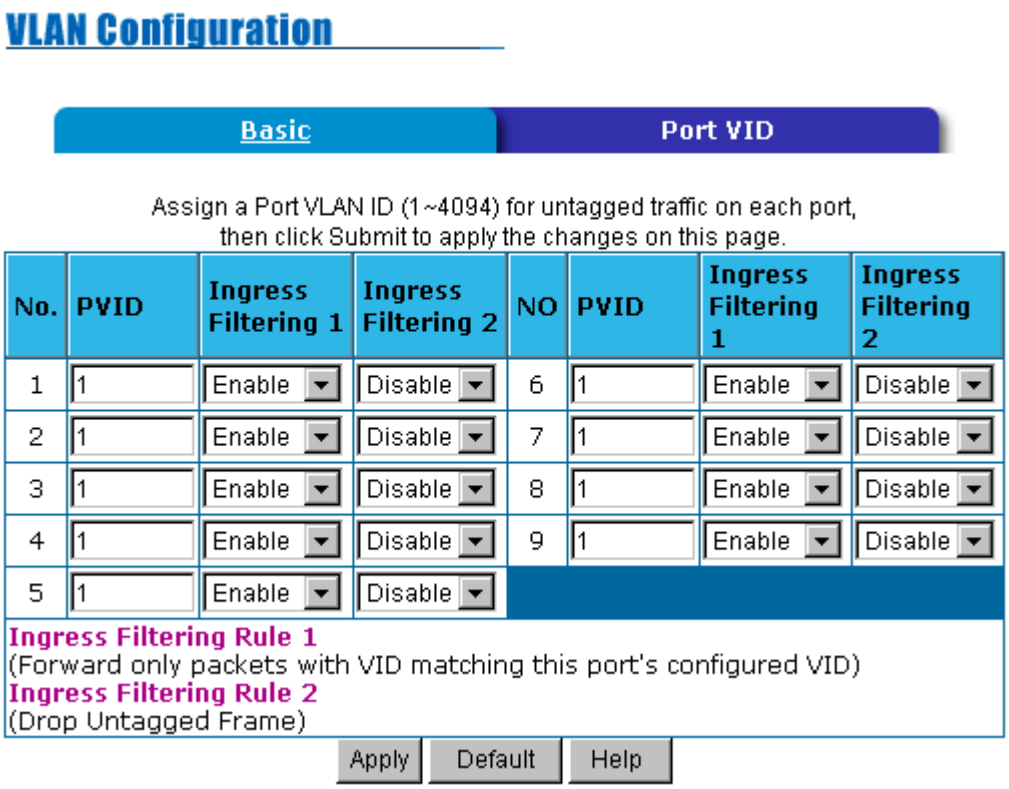


Create a VLAN and add tagged member ports to it.
1. From the main menu, click administrator -- VLAN configuration.
2. Click Add
3. Type a name for the new VLAN.
4. Type a VID (between 2-4094). The default is 1.
5. From the Available ports box, select ports to add to the switch and click Add.
6. Click Apply

5-4-7-2. Port VID

Configure port VID settings
From the main Tag-based (IEEE 802.1Q) VLAN page, click Port VID Settings.

Port VID (PVID)
Sets the Port VLAN ID that will be assigned to untagged traffic on a given port. For example, if port 9's Default PVID is 100, all untagged packets on port 9 will belong to VLAN 100. The default setting for all ports is VID 1. This feature is useful for accommodating devices that you would like to add to the VLAN but don't support tagging. Only one untagged VLAN is allowed per port.


VLAN Configuration
Basic
Port VID
Assign a Port VLAN ID (1~4094) for untagged traffic on each port,
then click Submit to apply the changes on this page.
No. PVID Ingress Filtering 1 Ingress Filtering 2 NO PVID Ingress Filtering 1 Ingress Filtering 2
1 1 Enable Disable 6 1 Enable Disable
2 1 Enable Disable 7 1 Enable Disable
3 1 Enable Disable 8 1 Enable Disable
4 1 Enable Disable 9 1 Enable Disable
5 1 Enable Disable
Ingress Filtering Rule 1
(Forward only packets with VID matching this port's configured VID)
Ingress Filtering Rule 2
(Drop Untagged Frame)
Apply
Default
Help

Ingress Filtering

Ingress filtering lets frames belonging to a specific VLAN be forwarded if the port belongs to that VLAN. The **SmartGST-801M** has two ingress filtering rules.

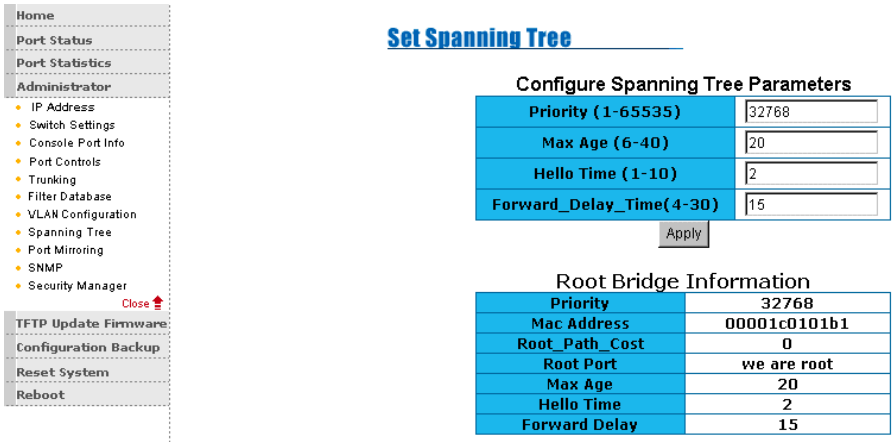
Ingress Filtering Rule 1: Forward only packets with VID matching this port's configured VID.

Ingress Filtering Rule 2: Drop Untagged Frames.

5-4-8. Spanning Tree

The Spanning-Tree Protocol (STP) is a standardized method (IEEE 802.1D) for avoiding loops in switched networks. Enabled STP ensures that only one path at a time is active between any two nodes on the network. You can enable Spanning-Tree Protocol on the Web Management s advanced page. Select enable Spanning-Tree protocol. Unicom recommends that you enable STP on all switches to ensure a single active path on the network.

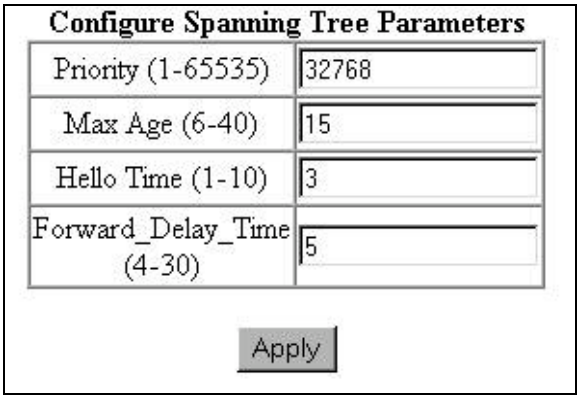
View spanning tree information about the Root Bridge on this screen.



View spanning tree status about the switch here.

STP Port Status

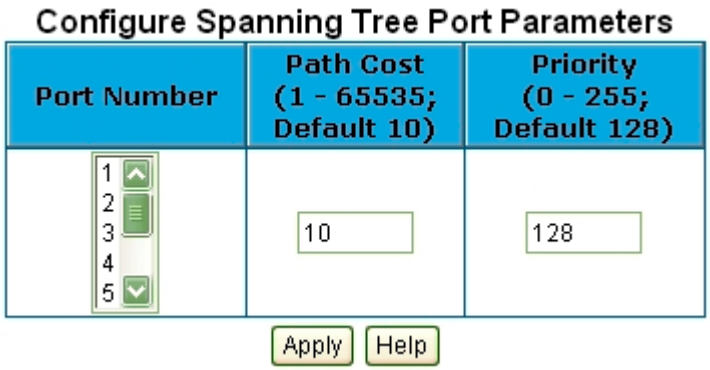
PortNum	PathCost	Priority	PortState
1	10	128	DISABLED
2	10	128	DISABLED
3	10	128	DISABLED
4	10	128	FORWARDING
5	10	128	DISABLED
6	10	128	DISABLED
7	10	128	DISABLED
8	10	128	DISABLED
9	10	128	DISABLED



Parameter	Description
Priority	You can change the priority value, a value used to identify the root bridge. The bridge with the lowest value has the highest priority and is selected as the root. Enter a number 1 through 65535.
Max Age	You can change the Max Age value, the number of seconds a bridge waits without receiving Spanning-Tree Protocol configuration messages before attempting a reconfiguration. Enter a number 6 through 40.
Hello Time	You can change Hello time value, the number of seconds between the transmission of Spanning-Tree Protocol configuration messages. Enter a number 1 through 10.

Forward Delay time	You can change forward delay time, the number of seconds a port waits before changing from its Spanning-Tree Protocol learning and listening states to the forwarding state. Enter a number 4 through 30.

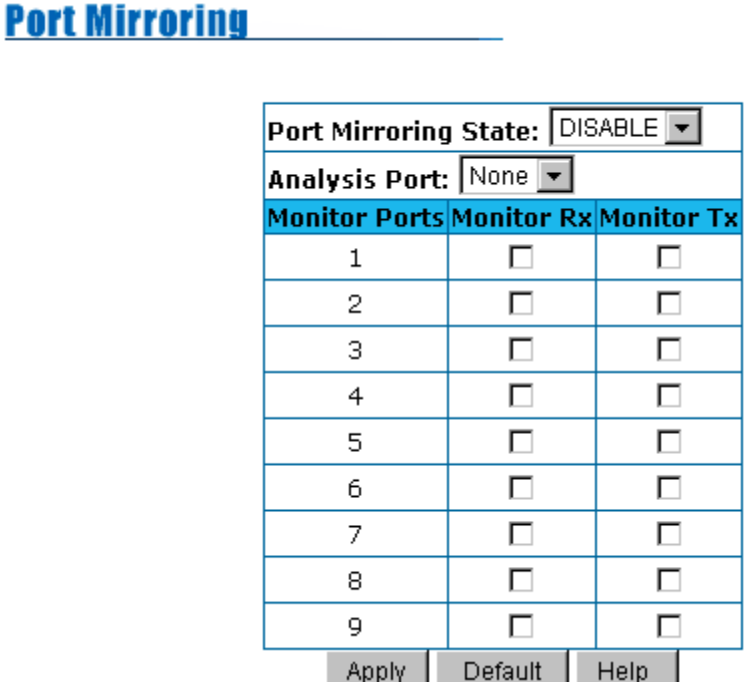
The following parameter can be configured on each port. Click **Apply**.



Parameter	Description
Port Priority	You can make a port more or less likely to become the Root Port. The range is 0-255. The default setting is 128. The lowest number has the highest priority. If you change the value, you must reboot the switch.
Path Cost	Specifies the path cost of the port that is used to determine which ports are the forwarding ports. The lowest number is the forwarding port. The range is 1 - 65535. The default value base on IEEE802.1D: 10Mb/s = 50-600 100Mb/s = 10-60 If you change the value, you must reboot the switch.

5-4-9. Port Mirror

The Port Mirror is a method of monitoring traffic in switched networks. Traffic through ports can be monitored by one specific port. That is, traffic going in or out of monitored ports will be duplicated into the mirror port.



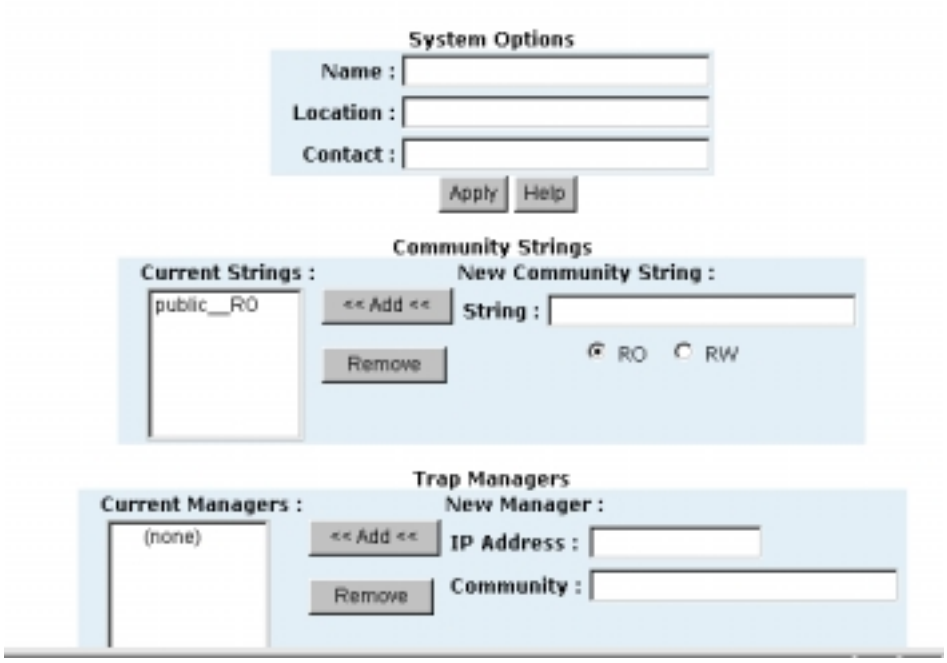
Roving Analysis State: Enable or disable the port mirror function.
Mirror Ports: The ports you want to mirror. All traffic selected here will be copied to the mirror port. You can select up to 9 monitor ports. To disable the function, select monitor port to none.
Monitor Rx: Monitor receiving frames from the port.
Monitor Tx: Monitor sending frames from the port.

5-4-10. SNMP

Any network management running the Simple Network Management Protocol (SNMP) can managed by the **SmartGST-801M** switch, provided the Management Information Base (MIB) is installed correctly on the management station. The SNMP is a Protocol that governs the transfer of information between management and agent. The **SmartGST-801M** supports SNMP V1.

1. Use this page to define management stations as trap managers and to enter SNMP community strings. User can also define a name, location, and contact person for the switch. Fill in the system options data, then click Apply to update the changes on this page

Name: Enter a name to be used for the switch.
Location: Enter the location of the switch.
Contact: Enter the name of a person or organization.

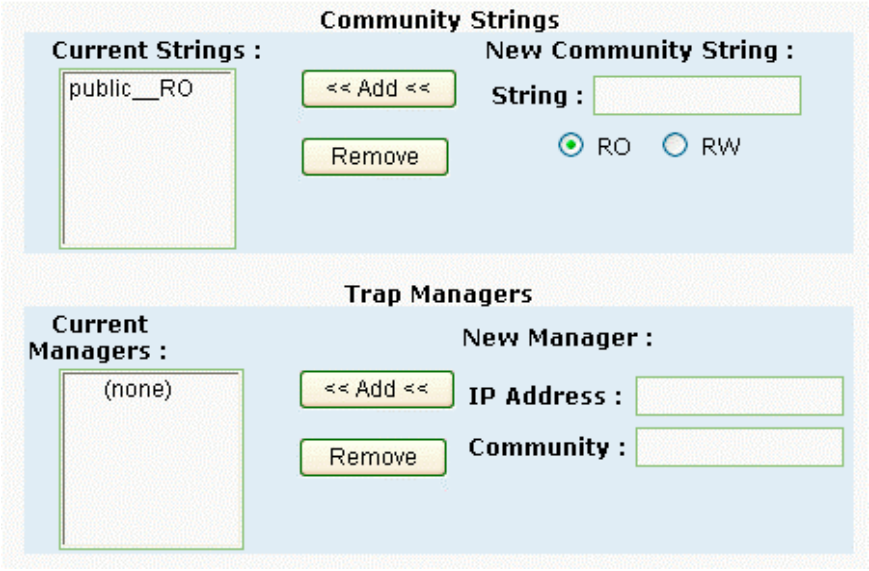


2. Community strings serve as passwords and can be entered as one of the following:

Read only: Enables requests accompanied by this string to display MIB-object information.
Read write: Enables requests accompanied by this string to display MIB-object information and to set MIB objects.

3. **Trap Manager**

A trap manager is a management station that receives traps, the system alerts generated by the switch. If no trap manager is defined, no traps are issued. Create a trap manager by entering the IP address of the station and a community string.



5-4-11.Security Manager

Here user can change web management user name and password.
User name: root (default)
Password: root (default)

5-4-12. TFTP Update Firmware

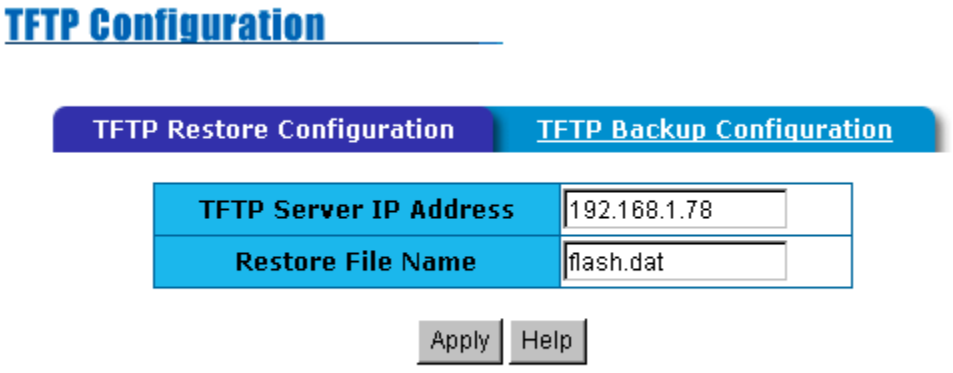
The following menu options provide system control functions such as firmware updates and remote system rebooting.

* Executing TFTP software
* Copy firmware update version image.bin to TFTP software directory.
* In web management select administrator TFTP update firmware.
* Download new image.bin file then in web management press <update firmware>.

5-4-13. Configuration Backup

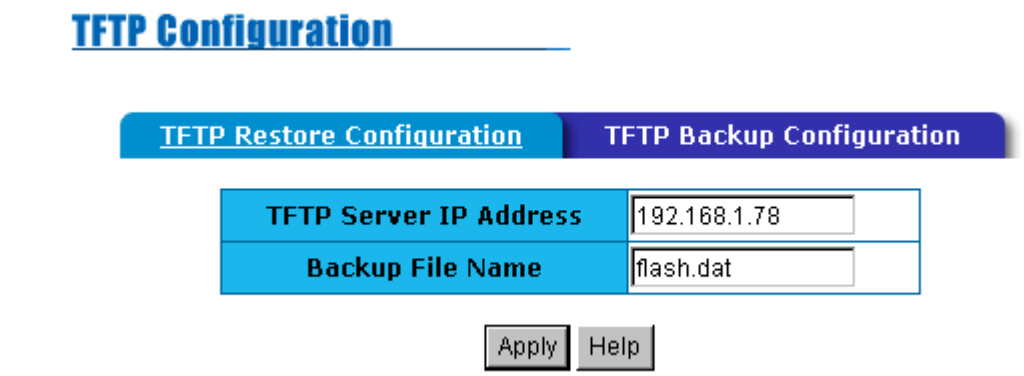
5-4-13-1. TFTP Restore Configuration

Use this page to set the TFTP server address. You can restore EEPROM values here but you must put back image into TFTP server or switch will download flash image.



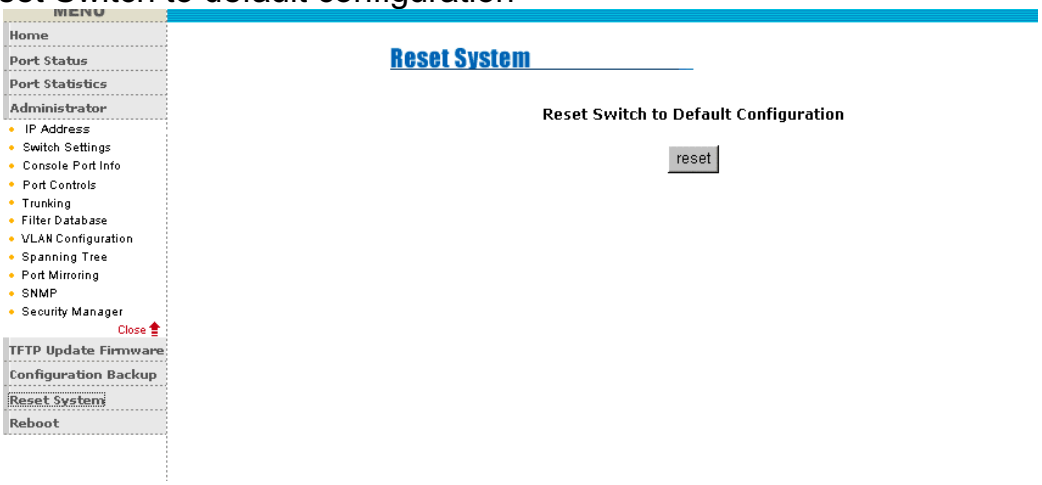
5-4-13-2. TFTP Backup Configuration

Use this page to set the TFTP server IP address. You can save current EEPROM values here and then go to the TFTP Restore Configuration page to restore the EEPROM value.



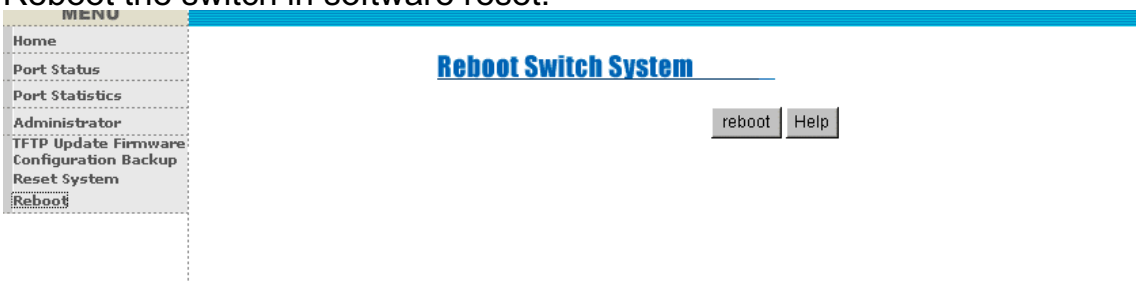
5-4-14. Reset System

Reset Switch to default configuration



5-4-15. Reboot

Reboot the switch in software reset.



6.
Technical Specifications

This section provides the specifications of **SmartGST801M** and the following table lists these specifications.

Specifications

Standards Compliance	IEEE 802.3u 100Base- FX Fast Ethernet IEEE 802.3z Gigabit Fiber
Protocol	CSMA/CD
Max Forwarding and Max Filtering Rate	14,8800 pps per Fast Ethernet port, 148,8000 pps per Gigabit Ethernet port (GBIC)
LED Indicators	Fiber Ports: LINK/ACTIVE, Full Duplex/Collision (100Mbps Fiber port); Link/Active (GBIC port) Per Unit: Power
Fiber Link Maximum Distance	SC/ST Multi-mode: Half-duplex: 412m, Full-duplex: 2Km SC Single Mode: Half-duplex: 412m, Full-duplex: 30Km
Dimensions	440mm x 160mm x 44mm (L x W x H)
Weight	2200g ±40 g
Storage Temp.	-40…C to 70…C (-40…F to 158…F)
Operational Temp.	0…C to 45…C (32…F to 113…F)
Operational Humidity	10% to 90% (Non-condensing)
External Power	100-240V AC, 50-60Hz
Power Consumption	17 Watts (Max)
EMI	FCC Class A, CE Mark
Safety	UL, cUL

7. Troubleshooting

This section is intended to help you solve the most common problems on the **SmartGST801M**.

Incorrect connections

- **Faulty or loose cables**
  Look for loose or obviously faulty connections. If they appear to be OK, make sure the connections are snug. If that does not correct the problem, try a different cable.

- **Non-standard cables**
  Non-standard and miswired cables may cause numerous network collisions and can seriously impair network performance.

- **Improper Network Topologies**
  It is important to make sure that you have a valid network topology. Common topology faults include excessive cable length and too many repeaters (hubs) between end nodes. In addition, you should make sure that your network topology contains no data path loops. Between any two ends nodes, there should be only one active cabling path at any time. Data path loops will cause broadcast storms that will severely impact your network performance.

Diagnosing LED Indicators

The switch can be easily monitored through panel indicators to assist in identifying problems. The LEDs indicate common problems you may encounter and where you can find possible solutions.

If the power indicator does not turn on when the power cord is plugged in, you may have a problem with power outlet or power cord. However if the Switch powers off after running a short time, check for loose power connections, power losses, or surges at the power outlet. If you still cannot resolve the problem, contact your local dealer for assistance.

n Cabling

100Base-FX fiber port: For Multi-Mode fiber, connectors must use 50/125 or 62.5/125 m Multi-Mode fiber cable. You can connect two devices up to 2 km apart. Single Mode fiber connectors must use 9/125 m Single Mode fiber cable. With Single Mode fiber cable, devices can be up to 30km apart in full duplex operation.